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BRACHIOPODA

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BY

H. M. MUIR-WOOD, D.Sc.

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Trias.—Alps, Wirz **190**; Austria, Plochinger **123**; Serbia, Bešić **14**; Montenegro, Bešić **15**; Danilova **29**; Peru, Boit **17**.

Rhaetic.—Austria, Zapfe **195**.

Jurassic.—England, Yorkshire (Corallian), Wilson **189**; (Lias & Dogger), Rastall & Hemingway **125**; Dorset (Lr. Lias) Lang **87**; France (Lr. Lias), Gardet **44**; (Lias & Aalenian), Alloiteau & Charles **6**; (Lias), Charles **22**; (Lias & Inf. Ool.), Theobald & Maubeuge **171**; Germany (Inf. Ool.), Wittmann **191**; Theobald & Maubeuge **171**; (Ur. Jurassic), Müller **110**; Spain, Mendizabal & Comba **102**; (Lias), Soler & Pardo **157**; Alps (Lias) Trümpy **174**; Lombardy (Lias) Vecchia **177**; **178**; Savoy (Kimmeridgian), Hirtz **65**; Switzerland (Inf. Ool. & Bath.), Mornod **109**; (Argovian), Jeannet **74**; Montenegro (Lias), Ćivić **25**; Mallorca (Lias) Colom **27**; Egypt, Farag **40**; Central Morocco (Lias), Termier & Termier **166**; U.S.A., Imlay **70**; British Columbia, McLearn **95**; Argentine (Lias), Frenguelli **42**.

Cretaceous.—Europe (Upper Cretaceous), Chavan **23**; England, Dorset (Cenomanian) Arkell **10**; France, Denizot **32**; Germany (Upper Cret.), Uhlig **175**; Switzerland (Lr. Cret.), Catzigras **21**; Poland (Lr. Cret.), Kokoszynska **82**; Spain, Mendizabal & Comba **102**; Serbia (L. Cret.) Petković **118**; **119**; E. Greenland (Albian), Donovan **34**; Maync **100**; Libya (Maestrichtian) Bruno **19**; Madagascar (Albian), Collignon **26**; U.S.A., Texas, Goldich & Elms **54**; Maryland (Ur. Cret.), Stephenson **158**.

Tertiary.—New Zealand, Allan **5**; Mason **98**.

Eocene.—France, Lapparent **88**; (Bartonian), Morellet **108**; Oregon, Snavely & Baldwin **156**.

Pliocene.—Italy, Ruggieri **143**; Cyprus, Douglas in Henson, Browne & McGinty **35**; Japan. Hatai **57**.

Pleistocene.—Italy, Malatesta **97**; Sicily, Ruggieri **142**; Tunis, Bede **13**; Labrador, Abrard & Aubert de la Rue **1**; California, Woodring, Bramlette & Kew **192**.

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III.—SYSTEMATIC INDEX

NOTE.—Classification mainly according to C. Schuchert and C. M. LeVene in Fossilium Catalogus 1 42 Brachiopoda 1929; and as emended by Schuchert & Cooper Mem. Peabody Mus. Yale **4** 1 1932.

Full references are given only in the case of new genera and species. In other cases the numeral in "Large bold Clarendon" refers to the list of titles where the full reference will be found. In the case where a reference is given in the Systematic Part the volume number is printed in "Small bold Clarendon."

ORDER PALAEOTREMATA

PATERINACEA

PATERINIDAE

†*Paterina williardi, wapta* figd., TILLYARD **173** p. 20.

ATREMATA

OBOLACEA

MICROMITRIDAE

†*Hisingerella* **gen. n.** type *H. nitens* (Hisinger 1838). p. 388, 389 fig., also to include *Acrotreta nana* Hadding 1913, ? *Micromitra* (*Paterina*) *davidsoni* (Reed 1917) Ordovician Vestergötland HENNINGSMOEN Bull. geol. Inst. Univ. Upsala **32** 1946–48.

†*Mickwitzia pretiosa* figd., TILLYARD **173** p. 20.

OBOLIDAE

†*Leptobolus insignis* figured pl. I, HOWELL **66**; *L. occidentalis* p. 2 pl. i D, WANG **180**.

†*Lingulella acuminata* p. 413 figd. MELÉNDEZ **101**; *L. ferruginea* p. 346, SCHMIDT **151**; Lingulellid gen. et. sp. ind. p. 395 HENNINGSMOEN **63**.

†*Lingulepis floridaensis* **sp. n.** Ur. Cambrian or Lr. Ordovician Northwestern Florida, HOWELL & RICHARDS Bull. Wagner Free Inst. Sci. Philadelphia **24** 4 1949 p. 35 pl. 1; *L.* sp. from core at 3670 ft. Ur. Cambrian or Lr. Ordovician of Dixie Co. N.W. Florida, HOWELL & RICHARDS **67** p. 1196.

†*Obolus parvus* figd., TILLYARD **173** p. 20; *O. conradi* p. 16 fig., WILSON **187**; *O. leonensis* p. 414 figd., MELÉNDEZ **101**.

†*Paterula* p. 391, cf. *bohemica* p. 392 fig., cf. *portlocki* p. 393 fig., HENNINGSMOEN **63**.

LINGULACEA

LINGULIDAE

Lingula having unicellular algae within cells of digestive glands in Recent Seas off Trincomalee, KIRTISINGHE **80** p. 970.

†*Lingula squamiformis*, SAMPELAYO **145** p. 41.; *L. squamiformis* figured pl. 16, IVANOVA **72**; *L. murchisoni* p. 9, sp. p. 10, RENAUD **138**; *L. mytiloides*, cf. *squamiformis* p. 22, *elongata* p. 23, SCHWARZBACH **152**; *L. iowaensis* pl. 1A, *changi*, p. 2, WANG **180**; *L. subovalis* recorded from Albian E. Greenland p. 10, DONOVAN **34**; *L.* sp. recorded, STEPHENSON **158** p. 122; *L.* sp. p. 54 fig., WIRZ **190**; *L.* p. 17, *briseis, cobourgensis, curta, elongata* p. 18 fig., *hullensis* **sp. n.**, *huronensis, narrawayi, obtusa* p. 19, fig., *philomela, rectilateralis major, riciniformis, sinclairi* **sp. n.** p. 20 fig., *trentonensis* p. 21 Mid. Ordovician Canada, WILSON Bull. Canada Dept. Min. Geol. Surv. **8** 1946.

†*Trigonoglossa* sp. CHRONIC **24** p. 53.

LINGULASMATIDAE

†*Lingulasma, eva* p. 21 fig., WILSON **187**.

TRIMERELLACEA

TRIMERELLIDAE

†*Dinobolus canadensis* p. 16 fig., *erectus* **sp. n.**, *magnificus* p. 17 fig., Mid. Ordovician Canada, WILSON Bull. Canada Dept. Mines geol. Surv. **8** 1946.

ORDER NEOTREMATA

SIPHONOTRETACEA

SIPHONOTRETIDAE

†*Cornwallia minuta* ? p. 22 fig., WILSON **187**.

†*Siphonotreta barrandei* p. 415 figd., MELÉNDEZ **101**.

ACROTRETACEA

Acrotretidae

†*Acrothele spurri* figd., Tillyard **173** p. 20; *A.* cf. *quadrilineata* p. 346 figd., sp. indet. p. 347 figd., Schmidt **151**.

†*Acrotreta ulrichi* figd., Tillyard **173** p. 20.

†*Conotreta* sp. p. 3. pl. ic. Wang **180**.

†*Linarssonella* [err. pro. *Linnarssonella*] *modesta* figd., Tillyard **173** p. 20.

DISCINACEA

Trematidae

†*Schizocrania filosa* p. 23 fig., *minuscula* **sp. n.** p. 24 fig. Mid Ordovician Canada, Wilson Bull. Canada Dept. Mines Geol. Surv. **8** 1946.

†*Trematis ottawaensis* p. 22 fig., *terminalis* p. 25 fig., Wilson **187**.

Discinidae

†*Discinia* [? err. pro. *Discina*] *primaeva* figd. p. 415, Meléndez **101**.

†*Lindstromella* aff. L. *patula* p. 54 pl. v., Chronic **24**.

†*Orbiculoidea prietana* **sp. n.** p. 53 pl. v figs. 1–4 Permian Peru, sp. p. 55, Chronic **24**; *O. avriliana* p. 10 *alexandrina*, sp. p. 11, Renaud **138**; *O. lamellosa* p. 24 fig., Wilson **187**.

†*Schizotreta canadensis* **sp. n.** *pelopea* p. 25 fig., Mid Ordovician Canada, Wilson Bull. Canada Dept. Min. Geol. Surv. **8** 1946.

CRANIACEA

Craniidae

†*Crania* described p. 25, *setigera*, *trentonensis* p. 26 fig., Wilson **187**.

†*Petrocrania meduanensis* p. 9, Renaud **138**.

†*Pholidops* described, *trentonensis* p. 26 fig., Wilson **187**.

†*Pseudocrania divaricata* vascular sinuses fig. 4., Termier & Termier **170**.

INCERTAE SEDIS

Valdiviathyridae

Valdiviathyris quenstedti described p. 135 figd., Helmcke **62**.

Valdiviathyridae systematic position of family discussed Helmcke **61** p. 96, Helmcke **62** p. 135.

ORDER PROTREMATA

SUBORDER ORTHOIDEA

ORTHACEA

Nisusiidae

†*Nisusia lowi* figd., Tillyard **173** p. 20.

†*Ocnerorthis soror* p. 102, 130, *filia* **sp. n.** p. 103, 131, figd. Tremadoc Bohemia, Havlíček Sbornik Stát. Geol. Úst. Československé **16** 1 1949.

Billingsellidae

†*Billingsella* vascular sinuses fig. 1., Termier & Termier **170**.

Ranorthidae

†*Ranorthidae* **fam. n.** for *Ranorthis* Öpik 1939, *lipoldi* **sp. n.** p. 261 (?) *grossi* p. 262 figd. Ordovician Bohemia, Havlíček Věstnik Stát. Geol. Úst. Československé Rep. **24** 1949.

†*Ranorthis lipoldi* **sp. n.** p. 261 (?) *Rhynchonella grossi* p. 262 figd. Ordovician Bohemia, Havlíček Věstnik Stát. geol. Úst. Československé Rep. **24** 1949.

Eoorthidae

†*Apheoorthina* **gen. n.** Type-species *A. ferrigena* **sp. n.** Tremadoc Central Bohemia p. 99, 101, 127, 128, *bohemica* **sp. n.** p. 101, 129 figd., Havlíček Sbornik Stát. Geol. Úst. Československé **16** 1 1949.

†*Eoorthis* aff. *primordialis* p. 348 figd., Schmidt **151**.

†*Jivinella* **gen. n.** p. 94, 122, type-species *Orthis incola* Barrande 1879 p. 96, 124, *praecedens* p. 97, 125, *slaviki*, *postcedens* **sp. n.** p. 98, 126, figd. Tremadoc Central Bohemia, Havlíček Sbornik Stát. Geol. Úst. Československé **16** 1 1949.

Hesperonomiidae

†*Hesperonomiella* ? *tenera* **nom. n.** for *Eoorthis bavarica* Prant & Ruzicka 1941 & type designated. Tremadoc Bohemia, Havlíček Sbornik Stát. Geol. Úst. Československé **16** 1 1949 p. 106, 134.

FINKELNBURGIIDAE

†*Finkelnburgia* sp. p. 103, 131. HAVLÍČEK **59**.

PLECTORTHIDAE

†*Doleroides* described, *gibbosus, pervetus ottawaensis* p. 49 fig., WILSON **187**.

†*Hebertella frankfortensis* fig. pl. ix. *occidentalis* fig. pl. xiv. *sinuata ponderosa* fig. pl. xviii, *insculpta, sinuata* fig. pl. xx, WILSON **188**.

†*Mimella melonica* vascular sinuses fig. 11, TERMIER & TERMIER **170**.

†*Orthostrophia brownsportensis* **sp. n.** p. 45 figd., Silurian U.S.A. (Tennessee) Bull. Peabody Mus. Nat. Hist. Yale Univ. **3** 1949.

†*Platystrophia* described p. 29. *uniplicata, precedens, trentonensis,* sp., *hermitagensis* p. 31 fig., *extensa, amoena, a. longicardinalis* p. 32, *a. robusta, elegantula, preponderosa* p. 33 fig., WILSON **187**; *P. amoena, elegantula* fig. pl. ix, *precursor, p. angusta, p. latifrons, colbiensis, c. mutata, elegantula triplicata,* fig. pl. xiv, *juvenis, nitida, strigosa, crassa, sublaticosta, ponderosa, laticosta,* fig. pl. xvii, *acuminata, cumingsi, annieana, foersti, f. ampla, ponderosa aubornensis* fig. pl. xx, WILSON **188**; *P. equiconvexa* **sp. n.** Ordovician U.S.A., WANG Mem. Geol. Soc. Amer. **42** 1949 p. 10 pl. 4B figs. 1–7.

†*Plectorthis* described, *neglecta* p. 27 fig., *ottawaensis* sp. n., *plicatella laurentina* **var. n.** *p. trentonensis, pulchella* **sp. n.** p. 28 fig., Mid Ordovician Canada, WILSON Bull. Canada Dept. Min. Geol. Surv. **8** 1946.

SKENIDIIDAE

†*Scenidium halli* fig., pl. iv, WILSON **188**.

†*Skenidioides* described **p. 33**, (?) *merope*, WILSON **187**.

ORTHIDAE

†*Angusticardinia zelenkai*, p. 105, 133 figd., HAVLÍČEK **59**.

†*Archaeorthis přibijli* **sp. n.** p. 258 figd. Ordovician Bohemia, HAVLÍČEK Věstník Stát. Geol. Úst. Československé Rep. **24** 1949.

†*Corineorthis pustula* **sp. n.** p. 230 fig., *globosa* **sp. n.** p. 232 fig., Ordovician Wales, WILLIAMS Geol. Mag. London **86** 4 1949.

†*Dolerorthis osiliensis* vascular sinuses figs. 18, 19, TERMIER & TERMIER **170**.

†*Eridorthis* described p. 36, *rocklandensis* **sp. nov.** p. 36 fig., Mid Ordovician Canada, WILSON Bull. Canada Dept. Mines. Geol. Surv. **8** 1946.

†*Glyptorthis* described, p. 35, *bellarugosa* p. 35 fig., *insculpta* p. 36, WILSON **187**; *G. bellarugosa* fig. pl. iv., WILSON **188**; *G. pulchra* **sp. n.** p. 4, pl. i E, Ordovician U.S.A., WANG Mem. Geol. Soc. Amer. **42** 1949.

†*Hesperorthis dynevorensis* **sp. n.** p. 226 fig. Ordovician Wales, WILLIAMS Geol. Mag. London **86** 4 1949; *H.* described *tricenaria* p. 34, WILSON **187**; *H. tricenaria* fig. pl. iv, WILSON **188**.

†*Nanorthis rara* **sp. n.** p. 104, 132 figd. Tremadoc Bohemia, HAVLÍČEK Sbornik Stát. Geol. Úst. Československé **16** 1 1949.

†*Nicolella actoniae* vascular sinuses fig. 13, TERMIER & TERMIER **170**.

†*Orthambonites ružičkai* **sp. n.** Tremadoc Bohemia, HAVLÍČEK Sbornik Stát. Geol. Úst. Československé **16** 1 1949 p. 105, 133 figd.

†*Orthis calligramma* vascular sinuses figs. 16, 17, "*O.*" *subcarinata* vascular sinuses fig. 12, TERMIER & TERMIER **170**; *O. striatula* p. 420 figd., MELÉNDEZ **101**; *O.* ? *potens* p. 113, 141, HAVLÍČEK **59**; *O.* ? *nocturna* p. 263 figd., HAVLÍČEK **58**.

†*Prantlina* **gen. n.** type-species *Orthis desiderata* Barrande 1848 pp. 258, 259, *oolitica* **sp. n.**, *bohemica* p. 260 Ordovician Bohemia, HAVLÍČEK Věstník Stát. Geol. Úst. Československé Rep. **24** 1949.

†*Schizoramma fissiplica* p. 45 figd., AMSDEN **8**; *S.* sp. ind. p. 400 fig., HENNINGSMOEN **63**.

PAURORTHIDAE

†*Paurorthis turgida* emend. p. 228 fig., Ordovician Wales, WILLIAMS Geol. Mag. London **86** 4 1949.

DINORTHIDAE

†*Austinella* genus described p. 7, *whitfieldi* pl. 2A, *kankakensis* pl. 2B p. 8, *delicata* **sp. n.** p. 9 pl. 1 F figs. 1–3, Ordovician U.S.A., WANG Mem. Geol. Soc. Amer. **42** 1949.

†*Dinorthis* described, *browni* **sp. n.** p. 39 fig., *calderi*, *dubia* **spp. n.** p. 40, fig., *iphigenia*, *i. media* **var. n.** p. 41, fig., *i. minor* **var. n.** (*Plaesiomys*) *meedsi germana* p. 42, *meedsi plana* **var. n.** *ottawaensis* **sp. n.**, *pectinella* p. 43, fig. cf. *sweeneyi*, *porcata*, *regularis* **sp. n.** p. 44 fig., *strathmoria*, *subquadrata*, *s. alternata* **var. n.** p. 45 fig., Mid. Ordovician Canada, WILSON Bull. Canada Dept. Min. Geol. Surv. **8** 1946; *D. subquadrata* fig. pl. xx, WILSON **188.**

†*Plaesiomys proavita* p. 4 pl. 2E, *subquadratus occidentalis* p. 5, pl. 2D. *bellilamellosus* pl. 2C, *planus* **spp. n.** p. 6 pl. 3C, *bellistriatus* **sp. n.** p. 7 pl. 3D, WANG Mem. Geol. Soc. Amer. **42** 1949.

†*Valcourea deflecta* fig. pl. v, WILSON **188.**

PORAMBONITIDAE

†*Poramborthis* **gen. n.** type-species *P. kloučeki* **sp. n.** Tremadoc Central Bohemia p. 107, 109, 137, *kettneri* Kloucek M.S. **sp. n.** 110, 138, *lamellosa* p. 111, 139, *grimmi* p. 111, 140, *anomala* **sp. n.** p. 112, 140 HAVLÍČEK Sbornik Stát. Geol. Úst. Československé **16** 1 1949.

CLITAMBONOIDEA

CLITAMBONACEA

TRITOECHIDAE

†*Tritoechia kolihai* **sp. n.** p. 113, 142 figd., *kodyari* **sp. n.** p. 114, 143, *uvalica* **sp. n.** p. 115, 144 Tremadoc Bohemia, HAVLÍČEK Sbornik. Stat. Geol. Úst. Československé **16** 1 1949.

CLITAMBONITIDAE

†*Clitambon* (err. pro. *Clinambon*) *anomalus* vascular sinuses fig. 7, TERMIER & TERMIER **170.**

†*Clitambonites* described p. 114, *ottawaensis* **sp. n.** p. 114 fig. Mid. Ordovician Canada, WILSON Bull. Canada Dept. Min. Geol. Surv. **8** 1946. *C.* vascular sinuses figs., 2, 3, TERMIER & TERMIER **170.**

†*Estlandia marginata* vascular sinuses figs. 8, 9, TERMIER & TERMIER **170.**

†*Ladogiella imbricata* vascular sinuses figs. 5, 6, TERMIER & TERMIER **170.**

†*Vellamo* described, *sinclairi* **sp. n.** *trentonensis* p. 115, fig. Middle Ordovician Canada, WILSON Bull. Canada Dept. Min. Geol. Surv. **8** 1946.

DALMANELLACEA

DALMANELLIDAE

†*Aulacella eifeliensis* p. 29, RENAUD **138.**

†*Cariniferella alpha* **sp. n.** p. 95, fig., *beta* **sp. n.** p. 96 fig., Devonian Victoria Australia GILL Mem. nat. Mus. Victoria **16** 1949; *C. dumontiana*, cf. *dumontiana* p. 36, RENAUD **138.**

†*Dalmanella elegantula* p. 419 figd., MELÉNDEZ **101**; *D. monnieri* p. 12, *verneuili* p. 13, *lunata*, cf. *lunata* p. 14, *fascicularis* p. 15, sp. aff *calligramma*, *boucreli* **sp. n.** p. 16 pl. xiii, figs. 7–10, sp. p. 17 pl. xiii, sp. p. 18. Devonian France, RENAUD Mém. Soc. géol. Min. Bretagne Rennes **7** 2 Paléont 1942; *D.* described p. 37, *millepunctata*, *paquettensis* p. 37. *rogata*, *whittakeri* p. 38 fig., WILSON **187**; *D. prototypa* **sp. n.** p. 168, fig. *parva* **sp. n.** p. 169 fig., Ordovician Wales, WILLIAMS Geol. Mag. **86** 3 1949; *D. fertilis* fig. pl. v, *elegantula* fig. pl. xxvi, *meeki* fig. pl. xx, WILSON **188**; *D. taunica* p. 285 figd., KUTSCHER **86**; *D.* (?) cf. *kopaninensis* p. 5, figd., KHODALEVICH **77.**

†*Diceromyonia* **gen. n.** p. 35, type species *tersa* Sardeson, p. 36 pl. 12B, *subrotundata* **sp. n.** p. 37 pl. 12A, Ur. Ordovician U.S.A., WANG Mem. Geol. Soc. Amer. **42** 1949.

†*Fascicostella gervillei* p. 18, pl. iv fig. 3, RENAUD **138.**

†*Horderleyella convexa* **sp. n.** p. 171 fig., *lata* **sp. n.** p. 172 fig., Ordovician, Wales, WILLIAMS Geol. Mag. **86** 3 1949.

†*Mendacella cliftonensis* **sp. n.**, (?) *lenticularis* p. 43 figd., Silurian U.S.A. (Tennessee), AMSDEN Bull. Peabody Mus. Nat. Hist. Yale Univ. **3** 1949.

†*Onniella* discussed, *quadrata* **sp. n.** p. 38 fig. Upper Ordovician U.S.A., WANG Mem. Geol. Soc. Amer. **42** 1949.

†*Parmorthis* sp. ind. cf. *elegantuloides* p. 6 figd., KHODALEVICH **77**; *P. brownsportensis* **sp. n.** Silurian U.S.A. (Tennessee) AMSDEN, Bull. Peabody Mus. Nat. Hist. Yale Univ. **3** 1949 p. 42; *P. vandiemeni* **sp. n.** p. 65 figd. Siluro-Devonian GILL Rec. Queen Victoria Mus. Launceston **2** 2 1948.

†*Proschizophoria maillieuxi* **sp. n.** nom. nud., RENAUD **129** p. 57; *P. maillieuxi* **sp. n.** Devonian France, RENAUD Mém. Soc. géol. min. Bretagne Rennes **7** 2 Paléont 1942 p. 24 pl. ii fig. 4; *P. personata* p. 285, KUTSCHER **86.**

†*Raymondella* status of genus proposed Bancroft 1933 with *typa* nom. nud. as type-species, preocc. *Raymondella* Reed 1935 (trilobita); brachiopod genus first defined by Whittington 1938 = *Bancroftina* Sinclair 1946, SINCLAIR **155** p. 438.

†*Resserella corpulenta* p. 37 fig., *c. circularis* **subsp. n.** p. 38 fig. Upper Ordovician U.S.A., WANG Mem. Geol. Soc. Amer. **42** 1949; *R. immatura* **sp. n.** p. 165, fig., var. *plana* **var. n.** p. 167 Ordovician Wales, WILLIAMS Geol. Mag. **86** 3 1949.

BILOBITIDAE

†*Bilobites* cf. *bilobus* p. 32 pl. xiv fig. 13 RENAUD **138**; *B. bilobus* p. 6 figd. KHODALEVICH **77**; *B.* cf. *B. bilobus* p. 44 figd., AMSDEN **8.**

MYSTROPHORIDAE

†*Mystrophora areola*, cf. *deshayesi* p. 37, *baylei* p. 38, RENAUD **138.**

RHIPIDOMELLIDAE

†*Platyorthis circularis* p. 33, *triangularis* p. 34, *opercularis* p. 35, pl. xiii, RENAUD **138.**

†*Rhipidomella newsomensis* fig. pl. xxvi, WILSON **188**; *R. hamomi* p. 30, pl. xiii, fig. 15. RENAUD **138**; *R.* sp. exterior and internal characters seen in X-ray photograph pl. ii, SCHMIDT **150**; *R. penniana* p. 95 pl. vi, *cora* p. 96, pl. xvi, CHRONIC **24.**

SCHIZOPHORIIDAE

†*Enteletes lamarckii* figured, IVANOVA **72**; *E. gibbosus* **sp. n.** p. 97 pl. xvi, figs. 9–14, Lower Permian Peru, CHRONIC Invertebrate Paleontology. II. Upper Paleozoic of Peru. Columbia Univ. **1949.**

†*Isorthis arcuaria* p. 44 figd., AMSDEN **8**; *I.* cf. *szajnochai* p. 7 figd., KHODALEVICH **77**; *I. miloni* **sp. n.** p. 25 pl. ii, figs. 5–8, *trigeri* p. 27, *tetragona* p. 28 Devonian France, RENAUD Mém. soc. géol. min. Bretagne Rennes **7** 2 Paléont 1942; *I. miloni* **sp. n.** nom. nud. p. 57, RENAUD **129.**

†*Pianodema subaequata* fig. pl. iv, WILSON **188.**

†*Schizophoria striatula* vascular sinuses fig. 10, TERMIER & TERMIER **170**; *S. kayserlingiana* p. 23 pl. i fig. 1, SCHWARZBACH **152**; *S. medvedizaensis*, **sp. n. nom. nud.** Carboniferous Stalingrad district, Russia, SAVINOV C.R. Acad. Sci. Moscow N.S. **69** 1 1949 p. 66; *S. provulvaria* p. 19 *vulvaria* p. 21, *striatula* p. 23, RENAUD **138.**

SUBORDER PENTAMEROIDEA

PENTAMERACEA

CAMERELLIDAE

†*Anastrophia acutiplicata* **sp. n.** p. 50 figd., Silurian U.S.A. (Tennessee), AMSDEN Bull. Peabody Mus. Nat. Hist. Yale Univ. **3** 1949; *A. internascens* fig. pl. xxvi, WILSON **188.**

†*Camarella turjensis* **sp. n.** p. 8, 90 figd., var. *biplicata* **var. n.** p. 9, 91 Silurian Ural Mts., KHODALEVICH Trans. Ural Geol. Surv. **1939**; *C.* described p. 117, *hemiplicata*, *parderi* p. 118 fig., *volborthi* p. 119 fig., WILSON **187.**

†*Parastrophinella divergens* p. 10 pl. 4A, WANG **180.**

PENTAMERIDAE

†*Barrandella krasnopolskii* p. 12, KHODALEVICH **77.**

†*Brooksina striata* p. 33 *conjugula* **sp. n.** p. 34, 101, (?) *crassa* **sp. n.** p. 35, 102, (?) sp. ind. p. 36 all figd. Silurian Ural Mts., KHODALEVICH, Trans. Ural Geol. Serv. **1939.**

†*Clorinda pseudolinguifera*, var. *oschica* p. 10, KHODALEVICH **77.**

†*Clorindina* **gen. n.** type species *C. uralica* **sp. n.** p. 11, 91 figd. Silurian Ural Mts., KHODALEVICH Trans. Ural Geol. Surv. **1939.**

†*Conchidiella* **gen. n.** type-species *Pentamerus pseudobaschkiricus* Tschernyschew, *schariiformis* **sp. n.** p. 32, 100 figd. Silurian Ural Mts., KHODALEVICH **77.**

†*Conchidium ochlerti* p. 38, cf. *hercynicum* p. 39 pl. iii, fig. 4, RENAUD **138**; *C. biloculare* p. 25, *lichensis* **sp. n.** p. 26, 98, *vogulicum* p. 26, var. *krutolowskiensis* **var. n.**, p. 27, 98 var. *vagranensis* **var. n.** p. 27, 99, *pseudoknighti*, sp. ind., *incurve* **sp. n.** p. 28, 99, *hospes* p. 29, *semireticulatum* p. 30, *triangulum* p. 30, 99, *karpinskii* p. 31, cf. *karpinskii* p. 32 all figured, KHODALEVICH Trans. Ural. Geol. Serv. **1939.** *C. lindenense* fig. pl. xxiii WILSON **188**; *C. polymitum* **sp. n.** p. 97 fig., Devonian Victoria, Australia, GILL Mem. nat. Mus. Victoria **16** 1949.

†*Gypidula* cf. *mansuyi* p. 251, fig., NONAKA **117**; *G. globus* p. 39, *galeata*, *affinis* p. 40, cf. *galeata*, sp. group of *galeata* p. 41, *heberti*, sp. p. 42, RENAUD **138**; *G. problematica* var. *crassa* **var. n.** p. 13, 92 figd., *uralica* p. 14, *olga* **sp. n.** p. 15, 93, *optata* p. 15, var. *nux* **var. n.** p. 16, 93, *integer* p. 17, var. *tenuis* **var. n.** p. 18, 94, *colongensis* **sp. n.** p. 18, 94, aff. *orbitata* p. 19, *galeata*, *parvula* p. 20 all figured, Silurian Ural Mts., KHODALEVICH Trans. Ural. Geol. Serv. **1939.**

†*Lissocoelina* (*Capelliniella*) *pirum* **sp. n.** p. 24, 97 figd., Silurian Ural Mts., KHODALEVICH Trans. Ural Geol. Serv. **1939.**

†*Pentamerifera* **gen. n.** type-species *Pentamerus baltiensis* Tschernyschew 1893, p. 22, 23, 96, figd. Silurian Ural Mts., KHODALEVICH Trans. Ural. Geol. Serv. **1939.**

†*Pentamerus undatus*, *globosus* vascular sinuses figs. 14, 15, TERMIER & TERMIER **170**; *P.* recorded, SUGIYAMA **161** p. 100; *P. knighti* p. 423 figd., MELÉNDEZ **101**; *P. oblongiformis* p. 23, (?) *magnus* **sp. n.** p. 24, 97 figd. Silurian Ural Mts., KHODALEVICH Trans. Ural Geol. Serv. **1939.**

†*Rhipidium pingue* **sp. n.** p. 47 figd., *sewellense* **sp. n.** p. 48 figd. & reconstructions from transverse sections Silurian U.S.A. (Tennessee) AMSDEN Bull. Peabody Mus. Nat. Hist. Yale Univ. **3** 1949.

†*Sieberella roemeri* p. 49 figd., AMSDEN **8.**

†*Wyella* **gen. n.** type-species *Eichwaldia uralica* Tschernyschew 1893 p. 21 95, Silurian Ural Mts., KHODALEVICH Trans. Ural. Geol. Serv. **1939.**

STROPHOMENOIDEA

STROPHOMENACEA

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†*Ahtiella* species discussed p. 515, *jentzschi* p. 518 fig., *dalecarlica* **sp. n.** p. 520 fig., *öandica* **sp. n.** p. 521, fig., *jaanussoni* **sp. n.** p. 523 fig., *plana* **sp. n.** p. 524 fig., Lower Ordovician Sweden HESSLAND Bull. Geol. Inst. Univ. Upsala **33** 1949.

†*Brachyprion glabella* **sp. n.** figd., Silurian U.S.A. (Tennessee), AMSDEN Bull. Peabody Mus. Nat. Hist. Yale Univ. **3** 1949 p. 52.

†*Chonetoidea mohawkensis* **sp. n.** p. 7, figd., Ordovician New York State, HOWELL Bull. Wagner Free Inst. Sci. **24** 1 1949.

†*Christiania* sp. ind. p. 400, HENNINGSMOEN **63.**

†*Davidsonia* lophophore & convexity of shell figs. 1–2 p. 62, TERMIER & TERMIER **167.**

†*Derbyia* cf. *D. tapajotensis* p. 78 pl. vi, *buchi* p. 79 pl. xii, CHRONIC **24**; *D. altestriata* p. 76 fig., KOSTIÓ-PODGORSKA **83.**

†*Douvillina interstrialis* p. 65, *elegans* p. 66, cf. *elegans*, *taeniolata* p. 67 *cedulae* p. 68 *dutertrii* p. 69, RENAUD **138.**

†*Fardenia roemeri* p. 53 figd., AMSDEN **8.**

†*Hipparionyx major* **sp. n.** p. 103 fig., Devonian Victoria Australia, GILL Mem. nat. Mus. Victoria **16** 1949; *H. hipponyx* p. 73, cf. *hipponyx* p. 74, RENAUD **138.**

†*Holtedahlina* sp. p. 34 fig. 2 sp. p. 35 fig. WANG **180.**

†*Kiangsiella pinguis* **sp. n.** p. 79 pl. xiii figs. 1–9, Lower Permian Peru, CHRONIC Invertebrate Paleontology II. Upper Paleozoic cf. Peru. Columbia Univ. **1949.**

†*Leptaena rhomboidalis* p. 70, *bouei* p. 72, RENAUD **138**; *L. analoga demaneti* subsp. n. p. 23 pl. i fig. 2, Carboniferous Visean-Namurian boundary Poland, SCHWARZBACH Palaeontograph. Stuttgart **97A** 1949; *L. rhomboidalis* fig. pl. xxvii, WILSON **188**; *L. analoga* vascular sinuses fig. 21, TERMIER & TERMIER **170**; *L. rhomboidalis, emarginata* p. 37, figd., KHODALEVICH **77**; *L. tennesseensis* sp. n. p. 54 figd., *delicata* sp. n. p. 55 figd., Silurian U.S.A. (Tennessee) AMSDEN Bull. Peabody Mus. Nat. Hist. Yale Univ. **3** 1949; *L. richmondensis* fig. pl. xix, WILSON **188**; *L. bouei* p. 459 fig., PILLET **121**; *L.* described, *affinis* sp. n. (?) *diminuta* sp. n., *trentonensis* p. 53 fig., WILSON **187**.

†*Lissostrophia* gen. n. type-species *L. cooperi* sp. n. Silurian U.S.A. (Oklahoma), AMSDEN J. Washington Acad. Sci. **39** 6 1949 p. 202.

†*Maoristrophia* spp. first recorded from Victoria, Australia & Tasmania GILL **53** p. 139.

†*Meekella eximia* p. 74, sp. ind. p. 75 fig., KOSTIĆ-PODGORSKA **83**; *M. medvedizaensis* sp. n. nom. nud. Carboniferous Stalingrad district, Russia. SAVINOV C.R. Acad. Sci. Moscow N.S. **69** 1 1949 p. 66.

†*Megamyonia* gen. n. type *knighti* sp. n. p. 32 pl. 9F, *unicostata* pl. 9A, *raymondi* pl. 9B p. 33, sp. p. 34 pl. 9C Ur. Ordovician U.S.A., WANG Mem. Geol. Soc. Amer. **42** 1949.

†*Microtrypa* gen. n. type *M. altilis* Wilson, p. 111 fig., (?) *modesta*, (?) *nasuta* p. 112 fig., (?) *nitida*, (?) *plana* p. 113 fig., ? *tersa* p. 114 fig. Middle Ordovician Canada, WILSON Bull. Canada Dept. Min. Geol. Surv. **8** 1946. (Described as new genus in Trans. R. Soc. Canada **39** 4 1945 & recorded in Z.R. for 1945.)

Opikina described p. 86, profiles of species p. 88, *ampla, auriculata, gloucesterensis* p. 89 fig., *hemispherica, ovalis* p. 90 fig., *platys, rugosa, r. avita* p. 91, *septataborealis, sinclairi, subtriangularis* p. 92 fig., *transitionalis, tumida* p. 93 fig., *wagneri, w. robusta, williamsi* p. 94 fig., range of species p. 99, WILSON **187**; *O. limbrata* sp. n. p. 22 pl. 6B, sp. p. 23 pl. 6C, Ur. Ordovician U.S.A., WANG Mem. Geol. Soc. Amer. **42** 1949.

†*Opikinella* described, *affinis, salmoni*, p. 95 figs., range of species p. 99, WILSON **187**.

†*Orthotetes* ? sp. p. 77 pl. ix, CHRONIC **24**.

†*Plectambonites* recorded, SUGIYAMA **161** p. 100; *P. saxea, clarksvillensis* fig. pl. xix, WILSON **188**; *P. lebanonensis* fig. pl. iv, WILSON **188**.

†*Protoleptostrophia affinalata* sp. n. p. 100 fig., Devonian Victoria Australia, GILL Mem. nat. Mus. Victoria **16** 1949; *P. plateia* sp. n. p. 64 figd. Siluro-Devonian (Eldon group), GILL Rec. Queen Victoria Mus. Launceston **2** 2 1948.

†*Rafinesquina hermitagensis* fig. pl. viii, *alternata, ponderosa* fig. pl. xviii, WILSON **188**; *R. ulrichi* figured pl. I, HOWELL **66**; *R.* discussed p. 54 outlines & profiles of Ordovician species p. 55, 56, 58, 59, 60, 62–64, *alternata, a. alata* p. 66 fig., *a. intermedia, a. plana* p. 67, *a. platys, a. pota* p. 68 fig., *a. quadrata, a. semiquadrata, a. transversa* p. 69 fig., *carlottina, lennoxensis* p. 70 fig. *apicalis, calderi, camerata* p. 71 fig., *equipunctata, esmondensis borealis* p. 72 fig., *hullensis, opeongoensis* p. 73 fig., *orleansensis, patula, praecursor* p. 74 fig., *prestonensis, robusta, rotunda* p. 75 fig., *subcamerata, subtrigonalis*, p. 76 fig. *declivis*, cf. *deerensis, deltoidea* p. 77 fig., *gibbosa, laurentina* p. 78 fig., *miodeltoidea, normalis* p. 79 fig., *normaloides, okulitchi* p. 80, *ottawaensis praedeltoidea* p. 81 fig., *salmoni* p. 82 fig. *sardesoni, semicircularis, s. minor* p. 83 fig., *sinuata* p. 84, ranges of species p. 85, 99, WILSON **187**.

†*Schellwienella* cf. *praeumbracula, pecten*, p. 39, KHODALEVICH **77**; *S. umbraculum* p. 460, PILLET **121**; *S. septirecta* p. 75, *umbraculum* p. 76, RENAUD **138**.

†*Schuchertella subplana* fig. pl. xxvii, WILSON **188**.

†*Sowerbyella* ? cf. *restricta, subcorrugatella* group, *rosettana* sp. n. p. 396, fig., sp. ind. p. 399 Ordovician Vestergötland, HENNINGSMOEN Bull. Geol. Inst. Upsala **32** 1946–48; *S.* described, (?) *minuta* sp. n. p. 50 fig., *punctostriata, sericea* p. 51 fig., *subovalis* p. 52 fig., WILSON **187**; *S. antiqua* var. *llandiloensis* var. n. Ordovician Wales, WILLIAMS Geol. Mag. London **86** 4 1949 p. 234 fig.

†*Streptorhynchus pelargonatus*, cfr. *semiplanus*, *crenistria* p. 77 fig., Kostić-Podgorska **83**; *S.* sp. p. 78 pl. vi, Chronic **24**; *S. umbraculum* p. 419 figd., Meléndez **101**.

†*Strophеodonta profunda*, *newsomensis* fig. pl. xxvii, Wilson **188**; *S.* n. sp. p. 251 fig., Nonaka **117**; *S. herculea* p. 285 figd., Kutscher **86**; *S.* (?) cf. *costatula* p. 38, figd., Khodalevich **77**; *S. clausa* p. 458, *piligera*, cf. *sedgwicki* fig. p. 459, Pillet **121**.

†*Strophеodonta* (*Leptostrophia*) *explanata* p. 59, cf. *explanata* p. 63, pl. iv, fig. 8, *explanata* p. 64, pl. v, fig. 6, Renaud **138**; *S.* (*L.*) sp. p. 25 fig., Nonaka **117**.

†*Strophеodonta* (*Strophеodonta*) *murchisoni* p. 43, pl. iv. fig. 12, *sedgwicki* p. 46 pl. iv, fig. 9, cf. *sedgwicki* pl. iv figs. 10, 11, cf. *virgata*, *herculea* p. 49, *piligera* p. 50, *gigas* p. 51, pl. v fig. 1, *verneuili*, sp. aff. *triculta* p. 53, *davousti* p. 54, cf. *davousti*, *sarthacensis* p. 55, *leblanci* p. 56, *clausa* pl. xiii figs. 13, 14, sp. group of *s. clausa*, *maestrana* p. 57, *comitans*, *soyei* p. 58, sp., Renaud **138**.

†*Strophomena jentzschi* specimens recorded as from Sweden discussed p. 512, from Estonia, Norway & N. German drift boulders discussed p. 513, species discussed p. 514, assigned to *Ahtiella* p. 514, Hessland **64**; *S.* described, *billingsi*, *delicatula* p. 101, cf. *dignata*, *extensa*, *filitexta* p. 102, *f. crenulata*, *f. obesa* p. 103, *irregularis*, *magna*, (?) *millionensis*, *affinis* p. 104 fig., *minuta*, *mollis* p. 105 fig., *planumbonapraecipita*, *rotunda* p. 106 fig., *thalia*, *venustula* p. 107 fig. sp. p. 108 Wilson **187**; *S. rhomboidalis* figd. p. 418, Meléndez **101**; *S. planumbona* p. 23, pl. 6D, *occidentalis* p. 24 pl. 7A, *elongata* pl. 6E, cf. *S. planoconvexa* pl. 7B, sp. pl. 8D, p. 25, *bidentata* **sp. n.** pl. 7E, *perconcava* **sp. n.** pl. 7C, *clermontensis* **sp. n.** pl. 7D, *amoena* **sp. n.** pl. 8A p. 27, *rugulifera* **sp. n.** pl. 8B, *bicornuta* **sp. n.** pl. 8C p. 28 Ur. Ordovician U.S.A. Wang Mem. Geol. Soc. Amer. **42** 1949; *S. filitexta* fig. pl. iv, *planumbona* fig. pl. xix, Wilson **188**; *S. expansa* vascular sinuses fig. 22, Termier & Termier **170**.

†*Strophonella australiensis* **sp. n.** p. 62 figd., *lyelli* **sp. n.** p. 64 figd. Siluro-Devonian (Eldon Group), Gill Rec. Queen Victoria Mus. Launceston **2** 2 1948; *S.* cf. *anaglypha* p. 69, pl. v, fig. 2, Renaud **138**; *S. prolongata*, *dixoni* p. 51 figd., *roemeri*, (?) *laxiplicata* p. 52, Amsden **8**.

†*Tetraphalerella* **gen. n.** type *cooperi* **sp. n.** p. 28, 29, pl. 8F, *neglecta* pl. 9G *planodorsata* pl. 9D p. 30, sp. i. pl. 8E, sp. 2 pl. 9H p. 31, Ur. Ordovician U.S.A., Wang Mem. Geol. Soc. Amer. **42** 1949.

†*Thaerodonta* **gen. n.** type *aspera* **sp. n.** p. 19, 20 pl. 11C, *recedens* pl. 11A, p. 20, *saxae* p. 21 pl. 11B, *dignata* **sp. n.** p. 22 pl. 11D, Ur. Ordovician U.S.A., Wang Mem. Geol. Soc. Amer. **42** 1949.

†*Trigrammaria* described, *pulchra* p. 108 fig., *trigonalis* p. 109 fig., *t. parva*, *t. prima* p. 110 fig. *t. tumida* p. 111 fig., Wilson **187**.

†*Triplecella* described, *diplicata* p. 117 fig., Wilson **187**.

†*Triplecia* described, *cuspidata*, *extans* p. 116 fig., *nuclea* p. 117 fig., Wilson **187**.

Chonetidae

†*Chonetes* cf. *C. hessensis* p. 81 pl. xiii, sp. p. 82, Chronic **24**; *C.* sp. p. 65 Gill **51**; *C. baragwanathi* **sp. n.** Devonian Victoria, Australia, Gill Mem. nat. Mus. Victoria **16** 1949 p. 107 fig.; *C. carboniferus* figured pl. 4, Ivanova **72**; *C. variolata* p. 78 fig., cfr. *obtusa*, sp. ind., *latesinuata* p. 79 fig., *mamontovi* **sp. n.**, *granulifera* p. 80 fig. Carboniferous Croatia, Kostić-Podgorska Ann. géol. Pen. Balkan Beograd **17** 1949; *tenuicostatus* p. 88, *boblayei* p. 89, pl. iv fig. 2, *semiradiatus* p. 92, *maillieuxi*, *kerfornei* **sp. n.** p. 93, pl. iv, fig. 1, *buchoti* pl. i fig. 1, pl. iv, figs. 5, 6, *marteli* **spp. n.** p. 94, pl. i, fig. 6, sp. pl. iv, sp. pl. iii, p. 95, sp. p. 196 Devonian France, Renaud Mém. Soc. géol. min. Bretagne Rennes **7** 2 Paléont 1942; *C. brinkmanni* **sp. n.** p. 24, pl. i figs. 7, 8, text-figs 4, 5 Carboniferous, Visean-Namurian boundary, *aureolus* **sp. n.** p. 25, pl. i figs. 4–6, text-fig. 6 Namurian Poland., Schwarzbach Palaeontograph, Stuttgart **97A** 1949.

†*Chonetes* (*Chonetes*) cf. *sarcinulatus* p. 640, *davousti* p. 461 fig., Pillet **121**; *C.* (*Chonetes*) *sarcinulatus* p. 79,

pl. iii, fig. 6, 7, sp. cf. *sarcinulatu s* p. 83 pl. iii, figs. 9. 10, *armatus*, sp. aff. *armatus* p. 84, sp. p. 85, RENAUD **138.**

†*Chonetes* (*Plicochonetes*) *plebejus* p. 85, sp. cf. *plebejus* p. 88, *minutus* p. 90 *davousti* p. 91, RENAUD **138.**

†*Chonetina* sp. Pennsylvanian Des Moines Livingston Co., Missouri, quantitative methods applied to, BURMA **20** p. 753.

†*Eodevonaria dilatata* p. 96, RENAUD **138.**

†*Lissochonetes amazonicus* ? p. 82, pl. vi *assula* **sp. n.** p. 83 pl. xiii, figs. 11–15, Lower Permian Peru, CHRONIC Invertebrate Paleontology II. Upper Paleozoic of Peru. Columbia Univ. **1949.**

†*Pliocochonetes waldschmidti waldschmidti* p. 26 text-fig. 7, *w. auriculatus* **subsp. n.** p. 27, pl. i, figs. 9–10, text-fig. 8, 9 Namurian, Poland, SCHWARZBACH Palaeontograph. Stuttgart **97A** 1949.

†*Tornquistia polita elevata* **subsp. n.** text fig. 10, *polita horribilis* **subsp. n.** p. 28 text-fig. 11 Carboniferous Namurian, Poland, SCHWARZBACH Palaeontograph. Stuttgart **97A** 1949.

PRODUCTACEA

PRODUCTIDAE

†*Alexenia* **gen. n.** p. 116, type-species *reticulata* **sp. n.** p. 89, 90, 117, *koluberica* **sp. n.** p. 92 118 fig. Middle or Upper Carboniferous Moscow Basin, IVANOV Trans. Moscow Geol. Trust **8** 1935.

†*Antiquatonia* gen. emend. p. 167, *hindi* p. 171, figd., var. *ustyensis* **var. n.** p. 183, var. *aspera* **var. n.** p. 185, *sulcata* p. 186, *costata* p. 189, *nerutshensis* **sp. n.** p. 195, *insculpta* p. 202, *znamenskiensis* p. 269, *serenensis* **sp. n.** p. 213, *prikschiana* p. 221, *kotlukovi* **sp. n.** p. 225, *khemenkovi* p. 228, *gracilis* p. 239, var. *bordukovensis* **var. n.** p. 244; *tadenkensis* **sp. n.** p. 248, *kremenskensis* p. 251, *abrami* **sp. n.** p. 254 var. *protvensis* **var. n.** p. 259 all figd. Carboniferous Moscow Basin, SARYTCHEVA Trans. Paleont. Inst. Acad. Sci. U.R.S.S. **18** 1949.

†*Avonia* ? *boulei* p. 85, pl. xiv, CHRONIC **24.**

†*Buxtonia peruviana* p. 88 pl. viii, CHRONIC **24**; *B.* p. 23, 102, *scabricula* var. *mosquensis* **var. n.** p. 25 fig., *juresanensis* p. 103, *subpunctata* p. 28, 103, fig., *gjeliensis* **sp. n.** p. 31, 103 fig., sp. fig. p. 32 Middle or Upper Carboniferous Moscow Basin, IVANOV Trans. Moscow Geol. Trust. **8** 1935.

†*Cancrinella villiersi* ? p. 94, pl. vi, CHRONIC **24.**

†*Dictyoclostus boliviensis* p. 86, pl. xiv, sp. 1 pl. vii, sp. 2 pl. xv, p. 87, CHRONIC **24**; *D.* genus emend p. 88, *semireticulatus* p. 91, *pinguis* var. *munda* **var. n.** p. 94, figs., var. *minor* **var. n.** p. 103, figd., *circumspinosus* figd. pl. 35 Carboniferous Russia, SARYTCHEVA Trans. Paleont Inst. Acad. Sci. U.R.S.S. **18** 1949; *D.* gen. emend p. 54, 109, *moelleri* p. 56, 109 fig., aff. *transversalis* p. 60 fig., *boliviensis* p. 61, 110 fig., *inflatiformis* **sp. n.** p. 64, 110 fig., *gruenewaldti* p. 66, 111 fig., cf. *uralicus* p. 67 fig., (?) *costatus* var. *minor* **var. n.** p. 111, *obraszoviensis* **sp. n.** p. 68, 111, fig., (?) *okensis* **sp. n.** p. 69, 111 fig. Middle or Upper Carboniferous Moscow Basin, IVANOV Trans. Moscow. Geol. Trust **8** 1935.

†*Echinoconchus pelliceus* **sp. n.** p. 90, pl. xv figs. 1–3, Lower Permian Peru, CHRONIC Invertebrate Paleontology II. Upper Paleozoic of Peru ColumbiaUniv. **1949**; *E. elegans* p. 87 fig., *punctatus* p. 88 fig., n. sp. aff. *punctatiformis* p. 89 fig., KOSTIĆ-PODGORSKA **83**; *E. elegans* p. 29, *defensus* p. 30, SCHWARZBACH **152**; *E.* gen emendp. 172, 101, *punctatus* p. 19 fig., *fasciatus* p. 1, 101, fig., *elegans* p. 23 101 fig., IVANOV **71**; *E.* sp. p. 55 fig., MINATO **104.**

†*Gigantella gigantea* p. 30, *gigantea gigantea* p. 31, pl. ii, fig. 10, text-fig. 12, *g. inflata* pl. ii, fig. 9, text-fig. 13, *gigantea* (subsp. ?), *striato-sulcata tenuicostata* **subsp. n.** pl. iii figs. 1, 2, text-fig. 14, aff. *striato-sulcata elongata* p. 33 pl. 111, fig. 3, text-fig. 15, cf. *gigantoides*, cf. *striatella* p. 34, *sarytscheffi*, *lata* pl. ii, fig. 8, *latissima latissima* p. 35, pl. ii, fig. 1, 2, *latissima prisca* pl. ii, fig. 5, *l. complicata* pl. ii, fig. 6, cf. *l. giganteiformis*, *schindewolfi* **sp. n.** p. 36, pl. ii, figs. 3, 4, *bisati* pl. ii, fig. 7, sp. p. 37, Visean Poland, SCHWARZBACH Palaeontograph. Stuttgart **97A** 1949; *G.* discussed p. 266 *dentifer* **sp. n.** p. 249, pl. xi fig. 2, pl. xii, fig. 2,

crassiventer **sp. n.** p. 257 pl. xi fig. 1, xii fig. 1, xiii 1–7. Lower Carboniferous England, PRENTICE Proc. Yorks. Geol. Soc. **27** 4 1949.

†*Juresania hispida* p. 89, pl. xiv, figs. 10–12, Lower Permian Peru, CHRONIC Invertebrate Paleontology. II. Upper Paleozoic of Peru. Columbia Univ. **1949.**

†*Krotovia* (?) cf. *laxispina*, (?) aff. *pustulata* p. 11 figs., ? aff. *tuberculata* (?) *karpinskiana* p. 12, 100, fig., (?) nov. sp. 1, IVANOV **71.**

†*Linoproductus lineatus* p. 54 fig., MINATO **104**; *L. cora* p. 92, pl. vii, CHRONIC **24**; *L.* gen. emend. p. 32, 104, *cora* var. *tschernyschewi* **var. n.**, *cora* p. 35 fig., var. *semichatovae* **var. n.**, *lineatus* p. 36 fig., *cora-lineatus* **sp. n.** p. 37, 105, *ovalis* **sp. n.** p. 39 *tenuistriatus* fig. p. 40, 106, *neffedievi* p. 42 fig., *starizensis* **sp. n.** p. 43 fig., *latiplanus* **sp. n.** p. 44 fig., aff. *ufensis* p. 45, 107 fig., *simensis* p. 46 fig., (?) *tenuicostus* (p. 48 fig., (?) *undiferus* p. 49 fig., (?) *undatus* (?) *cancriniformis* p. 50 fig., (?) *koninckianus* var. *jakowlevi* **var. n.** p. 51, 108 fig., (?) *nikitini* **sp. n.** p. 52 fig. 109, (?) nov. sp. II, (?) nov. sp. III p. 53 fig., Middle or Upper Carboniferous Moscow Basin, IVANOV Trans. Moscow Geol. Trust **8** 1935; *L.* figured p. 114–115, *latiplanus* figd., *simensis* figd. p. 117, *starizensis*, *ovalis* figd., aff. *ufensis*, *tenuistriatus*, *neffedievi*, *cora*, var. *tschernyschewi* p. 119, *cora* var. *semichatovae*, *cora-lineatus* figd. *lineatus* figd. p. 120, IVANOVA **72.**

Marginifera capaci p. 91 pl. xi, CHRONIC **24**; *M.* genus emend., p. 75, 112, *typica* var. *borealis* **var. n.** p. 78, 113, fig., *t.* var. *assinuata* **var. n.**, *t.* var. *longa* **var. n.** p. 79 fig., *timanica* p. 80, 113, fig., *t.* var. *longa* **var. n.**, *carniolica* p. 82, 114, fig., *kaschkirica* p. 83, 114 fig., *k.* var. *obrotunda* **var. n.**, *spinosa* **sp. n.** p. 84, 115, fig., (?) aff. *setosa*, (?) *pseudoartiensis* p. 85, 115, fig., IVANOV Trans. Moscow Geol. Trust **8** 1935; *M. pusilla* p. 90 fig., KOSTIĆ-PODGORSKA **83.**

†*Neoproboscidella* [? gen. nov.] figd. pl. 3, *volgensis* Stuckenberg mentioned in text p. 47, IVANOVA **72.**

†*Overtonia* ? **sp.** p. 89 pl. vi, CHRONIC **24.**

†*Proboscidella* genus described p. 115, (?) *genuina* p. 87 fig., IVANOV **71** p. 86 116.

†*Productella subaculeata* p. 76, sp. aff. *dutertrii* p. 78, RENAUD **138.**

†*Productus semireticulatus* p. 421 figd., MELÉNDEZ **101**; *P. cora* p. 81 fig., var. *lineata* p. 82, *mölleri* var. *pilari* **var. n.** ? p. 83 fig., *incisus* p. 84 fig., *grünewaldti* p. 85 fig., KOSTIĆ-PODGORSKA **83**; *P. concinnus* figured, SARYTCHEVA **146**; *P.* lophophore & convexity of shell figs. 3–4 p. 62, TERMIER & TERMIER **167**; *P.* cf. *productus*, *productus* p. 29, pl. iii, fig. 4–5, Visean Poland, SCHWARZBACH Palaeontograph. Stuttgart **97A** 1949; *P. nikitinisimilis* **sp. n., nom. nud.** Carboniferous Stalingrad district, Russia, SAVINOV C.R. Acad. Sci. Moscow N.S. **69** 1 1949 p. 66; *P. hemisphericus* discussed p. 265, PRENTICE **124**; *P.* sp. p. 85 fig., NONAKA **116.**

†*Productus* (*Marginifera*) *gobiensis* p. 85, fig., NONAKA **116.**

†*Productus* (*Marginifera*) *globrensis* p. 85, fig., NONAKA **116.**

†*Productus* (*Pseudomarginifera*) *aagardi* figd., pl. 35, SARYTCHEVA **146.**

†*Productus* (*Pustula*) *curvirostris* p. 83 fig., KOSTIĆ-PODGORSKA **83.**

†*Pugilis* **gen. n.** type *Productus pugilis* Phillips, p. 104, *pugilis* p. 107, aff. *pugilis* p. 109, *serpukhovensis* **sp. n.** p. 110, *pugiloides* **sp. n.** p. 116, *subscoticus* **sp. n.** p. 118, *ninae* **sp. n,** p. 129, *schwetzovi* **sp. n.** p. 132, *rossicus* **sp. n.** p. 138, *tarussensis* **sp. n.** p. 144, *pugiliformis* p. 145, *luzhkiensis* **sp. n.** *moshkovensis* **sp. n.** p. 154, sp. p. 158, (?) *annae* **sp. n.** p. 160, Carboniferous Moscow Basin, SARYTCHEVA Trans. Paleont. Inst. Acad. Sci. U.R.S.S. **18** 1949.

†*Striatifera spinifera* figured, SARYTCHEVA **146.**

†*Strophalosia productoides* p. 78, *lorieri* p. 79, RENAUD **138**; *S. plicatifera* p. 86 fig., NONAKA **116.**

†*Thomasina* (?) *adhaerescens* **sp. n.** p. 70, 112, fig., (?) *kaschirica* **sp. n.** p. 73 112 fig. (?) *mexicana*, (?) sp. IV p. 74 Middle or Upper Carboniferous Moscow Basin, IVANOV Trans. Moscow Geol. Trust **8** 1935.

†*Waagenoconcha humboldti* p. 91 pl. xv, CHRONIC **24**; *W.* gen. emend. p. 14, 100, *humboldti, pseudoaculeata* p. 15, 101, fig., *tastubensis, praepermica* p. 17, 101 fig., IVANOV **71**.

RICHTHOFENIIDAE

†*Teguliferina* p. 98, figd. *miatschkovensis, rossica* p. 102, IVANOVA **72**; *T.* p. 92, 118, fig. *rossica* p. 95, 118, fig., *mjatschkowensis* p. 97, 119, fig., IVANOV **71**.

OLDHAMINIDAE

†*Keyserlingina* figured, p. 96, *plana* pl. 16, IVANOVA **72**.

†*Lyttonia* lophophore & convexity of valves figs. 7–9 p. 62, TERMIER & TERMIER **167**.

THECIDEIDAE

†*Thecidea* lophophore & convexity of shell figs. 5–6, p. 62, TERMIER & TERMIER **167**.

? PROTREMATA

EICHWALDIIDAE

†*Dictyonella recticulata* fig. pl. xxvi, WILSON **188**; *D. gibbosa* p. 62 figd., AMSDEN **8**.

†*Eichwaldiá* described p. 119, *subtrigonalis* p. 120 fig., WILSON **187**.

INCERTAE SEDIS

CAMEROPHORIACEA

CAMEROPHORIIDAE

†*Camarophoria* vascular sinuses fig. 28, TERMIER & TERMIER **170**; *C. alpina* p. 91 fig., KOSTIĆ-PODGORSKA **83**; *C.* group *sella* aff. *pentameroides* fig., n. sp. figured, *purdoni*, group of *pentameroides*, group of *sella* figd. pl. 16, IVANOVA **72**.

†*Camaropholia* ? [err. pro-*phoria*] *ozakii* **nom. n.** for *purdoniformis* Ozaki non Grabau., NONAKA Jap. J. Geol. Geogr. **19** 1–4 1944 p. 85.

STRICKLANDIIDAE

†*Stricklandinia* vascular sinuses fig. 20, TERMIER & TERMIER **170**.

ORDER TELOTREMATA

SUBORDER SPIRIFEROIDEA

RHYNCHONELLACEA

CAMAROTOECHIIDAE

†*Camarotoechia perryvillensis* **sp. n.**, *shannonensis* **sp. n.** p. 56 figs., *eccentrica* **sp. n.**, *acutiplicata* **sp. n.** p. 57 figd., transverse sections *cedarensis* **sp. n.** p. 58 figd. Silurian U.S.A. (Tennessee), AMSDEN Bull. Peabody Mus. Nat. Hist. Yale Univ. **3** 1949; *C. famula* var. *modica, daphne* p. 40, (?) *kuschvensis*, (?) *ivdeli* **sp. n.** p. 41, p. 103 Silurian Ural Mts., KHODALEVICH Trans. Ural. Geol. Serv. **1939**; *C. daleidensis* p. 248 KUTSCHER **86**; *C.* sp. indet. p. 252 fig., NONAKA **117**; *C. daleidensis* p. 98, sp. cf. *daleidensis, cognata, boloniensis* p. 101, *thebaulti* p. 102, *hexatoma, phaenix* p. 103, *tetratoma, cypris* p. 104, *guillieri* p. 105, cf. *guillieri*, sp. p. 106, ? *passieri* p. 107, RENAUD **138**; *C. pleurodon, raricosta* p. 38 pl. i, fig., 13, 14, SCHWARZBACH **152**; *C. indianensis, whitei, acinus* fig. pl. xxvi, WILSON **188**; *C. orientalis* fig. pl. iv, WILSON **188**.

†*Dinapophysia papilio* p. 283 fig., KUTSCHER **86**.

†*Eatonia* (*Pareatonia*) *euplecta* **sp. n.** p. 59 figs. Siluro-Devonian (Eldon Group) Western Tasmania, GILL Rec. Queen Victoria Mus. Launceston **2** 2 1948 p. 59.

†*Hypsiptycha* **gen. n.** type *H. hybrida* **sp. n.** p. 17 pl. 10B figs. 1–9, *neenah* p. 18, pl. 10C Ur. Ordovician U.S.A., WANG Mem. Geol. Soc. Amer. **42** 1949.

†*Leiorhynchus* aff. *L. rockymontanus* p. 55, pl. v fig. 8, CHRONIC **24**.

†*Lepidocyclus* **gen. n.** type *L. laddi* **sp. n.** p. 12, 13, pl. 4D figs. 1–9, *perlamellosus* pl. 6A, *manniensis*, p. 14 pl. 5D, *erectus* **sp. n.** pl. 5B, *rectangularis* **sp. n.** pl. 5A p. 15, *notatus* **sp. n.** pl. 5C, *gigas* **sp. n.** pl. 16 pl. 10D, Ordovician U.S.A., WANG Mem. Geol. Soc. Amer. **42** 1949.

†*Orthorhynchula linneyi* fig. pl. xviii WILSON **188**.

†*Pugnax* sp. anterior commissure figured fig. 35, TERMIER & TERMIER **170**; *P.* vascular sinuses fig. 30, TERMIER & TERMIER **170**.

†*Rhynchopora magnicosta amotapensis* **subsp. n.** Middle Pennsylvanian p. 98, pl. vii figs. 4, 5, aff. *R. illinoisensis* p. 99 pl. xvii, Lower Permian Peru, CHRONIC Invertebrate Paleontology II Upper Paleozoic of Peru, Columbia Univ. **1949.**

†*Rhynchotrema* genus & type-species *increbescens* discussed p. 11, *iowense* **sp. n.** p. 12 pl. 4C figs. 1–9 Ordovician U.S.A., WANG Mem. Geol. Soc. Amer. **42** 1949; *R.* described, *ainsliei, increbescens* p. 120 fig., *intermedia,* (?) *ottawaensis* p. 121, fig., WILSON **187**; *R. increbescens* fig. pl. ix, *capax,* sp. *dentatum,* fig. pl. xix, WILSON **188.**

†*Rhynchotreta ? brulonensis,* RENAUD **138** p. 114.

†*Rostricellula triangularis* **sp. n.** p. 235, fig., WILLIAMS Geol. Mag. London **86** 4 1949.

†*Straelenia letissieri* p. 114, (?) *chaignoni* p. 115, RENAUD **138.**

†*Trigonirhynchia tennesseensis* emend. p. 59, figd., AMSDEN **8.**

†*Uncinulina* (?) *berenice,* var. *linguata* **var. n.** p. 43, 103, all figured Silurian Ural Mts., KHODALEVICH Trans. Ural Geol. Serv. **1939.**

Uncinulus subwilsoni p. 107, *orbignyanus* p. 108, pl. v. fig. 7, *oehlerti* p. 109, *princeps* var. *armoricana* p. 110, *primipilaris,* sp. cf. *modicus* p. 111, (?) *puilloni* p. 112, (?) *fallaciosus* p. 113, RENAUD **138**; *U.* sp. p. 461, PILLET **121**; *U. stricklandi* fig. pl. xxvi, WILSON **188**; *U. ibergensis, parallelipipedus,* vascular sinuses figs. 26, 27, TERMIER & TERMIER **170.**

Uncinulus (*Eatonia*) *eifeliensis* p. 284, fig., KUTSCHER **86.**

†*Uncinulus* (*Hypothyris*) *parallelipipedus* p. 112, RENAUD **138.**

†*Wellerella osagensis peruviana* **subsp. n. p.** 56 pl. 9 figs. 1–6, *bidentata parva* **subsp. n.** p. 59 pl. ix, figs. 7–9, *minuta* **sp. n.** p. 60, pl. ix, figs. 10–13, Permian Peru, CHRONIC **24.**

†*Wilsonella* (= *Wilsonia* Kayser 1871 non Bonaparte 1838) *saffordi,* p. 60 figd., (?) *compressa* **sp. n.,** (?) sp. p. 61, Silurian U.S.A. (Tennessee) AMSDEN Bull. Peabody Mus. Nat. Hist. Yale Univ. **3** 1949. [*Wilsonella* Nikiforova 1937 preoccupied *Wilsonella* Carter 1885 = *Sphaerirhynchia* Cooper & Muir-Wood 1951]; *W. tarda, wilsoni* var. *vagranica* p. 44, KHODALEVICH **77.**

†*Wilsonia saffordi* fig. pl. xxiii, WILSON **188.**

RHYNCHONELLIDAE

Aetheia colurnus figured p. 334, ALLAN **3.**

†*Halorella amphitoma* var. *rarecostata* p. 176, DANILOVA **29**; *H.* genus discussed, TERMIER & TERMIER **169** p. 113.

†*Rhynchonella megabiensis* var. p. 160 figd., *glycina, furcilla a,* figd. p. 161, *amalthei* p. 162, *belemnitica* figd., *plicatissima* p. 163, *alfredi, gümbeli* figd. p. 164, aff. *gümbeli,* cfr. *prava* p. 165, sp. cf. *jaccardi* p. 166, *variabilis* figd. p. 166, *zugmayeri* figd. p. 167, *beneckei* figd. p. 168, sp. ind. n. sp. figd. p. 169, ĆERIĆ **25**; *R. mentzelii* p. 175, DANILOVA **29**; *R.* sp. p. 79, 118, 121, sp. nov. aff. *deffneri* p. 80, *plicatissima* p. 121, cf. *calcicosta* p. 145, *rostellata,* sp. nov. aff. *lineata* p. 146, *R.* sp. cf. *jurensis,* TRÜMPY **174** p. 168; *R.* lophophore in *R. nigricans* in horizontal and longitudinal section figs. 10–12 p. 63, TERMIER & TERMIER **167**; *R. subangulata* figured plate opp. p. 28, SOLER & PARDO **157**; *R. tetraedra* p. 432 figd., *meridionalis* p. 433 figd., MELÉNDEZ **101**; *R. gibbsiana* pl. v., fig. 25, cf. *multiformis,* aff. *renauxiana* p. 72, cf. *valanginiensis* p. 73, KOKOSZYNSKA **82**; *R. plicatella* p. 6, figured, pl. 1, fig. 10, from Aalenian of Provence, ALLOITEAU & CHARLES **6**; *R. vivida, mentzelii* p. 111 fig., *illyrica* p. 112 fig., *pivae* **sp. n.** p. 113, 119, 121 (French descr.) fig., *decurtata* p. 113, Trias Montenegro, BEŠIĆ **15.**

†*Rhynchonellina juvavica* var. *dichotoma,* sp. ind. p. 177, DANILOVA **29.**

Tegulorhynchia distribution of genus discussed in Recent & Tertiary, ALLAN **5** p. 288.

DIMERELLIDAE

†Dimerellidae systematic position of family discussed, HELMCKE **61** p. 95.

ATRYPACEA

ATRYPIDAE

†*Atrypa tennesseensis* **sp. n.** p. 62 figd., *arctostriata* p. 63 figd., Silurian U.S.A. (Tennessee), AMSDEN Bull. Peabody Mus. Nat. Hist. Yale Univ.

3 1949; *A.* genus diagnosed p. 208, genolectotype *A. reticularis* (Linn.), *reticularis* lectotype selected p. 208 fig., structure described p. 209, fig. var. *davidsoni* **var. n.** var. *harknessi* **var. n.** p. 213 fig., var. *lapworthi*, var. *lonsdalei* **vars. n.** p. 214 fig., var. *murchisoni*, var. *sedgwicki* **vars. n.** p. 215 fig., var. *sowerbyi*. var. *woodwardi* **vars. n.**, p. 216, fig., ALEXANDER Quart. J. Geol. Soc. London **104** 2 1949; *A. reticularis* fig. pl. xxvi, WILSON **188**; *A.* vascular sinuses in, fig. 29, TERMIER & TERMIER **170**; *A.* lophophore and convexity of shell figs. 13–14, p. 63, TERMIER & TERMIER **167**; *A. reticularis* p. 165, *lorana* p. 166, *aspera* p. 167, *latilinguis*, *zonata* p. 168, RENAUD **138**; *A. reticularis* p. 463, PILLET **121**; *A. desquamata* p. 252 fig., NONAKA **117**; *A. reticularis* p. 429 figd., MELÉNDEZ **101**; *A. insolita* p. 46, *granulifera*, *marginalis*, p. 47, *barba* **sp. n.** p. 48, 105, *sublepida*, *reticularis* p. 49 all figd., Silurian Ural Mts., KHODALEVICH Trans. Ural. Geol. Serv. **1939**.

Atrypinella **subgen. n.** of *Atrypa* type-species *Atrypinella biloba* **sp. n.** p. 45, 104, figd. Silurian Ural Mts., KHODALEVICH Trans. Ural. Geol. Serv. **1939**.

†*Dzieduszyckia* genus discussed p. 113, TERMIER & TERMIER **169**.

†*Karpinskya vagranensis* **sp. n.** p. 61, 108, figd. Silurian Ural Mts., KHODALEVICH Trans. Ural Geol. Serv. **1939**.

†*Lissatrypa decaturensis* **sp. n.** p. 64 figd. Silurian U.S.A. (Tennessee), AMSDEN Bull. Peabody Mus. Nat. Hist. Yale Univ. **3** 1949; *L. camelina* p. 50, *cuboidoformis* p. 51, *linguata*, var. *columbella* p. 52, *kuschvensis* p. 53, *penitus* **sp. n.** p. 54, 105, var. *elongata* **var. n.**, p. 55, 105, *latisinuata* p. 55, cf. *sulcata*, cf. *zelia* p. 56, (?) *tectiformis*, p. 57 *linguifera* **sp. n.** p. 57, 106, *gigas* **sp. n.** p. 58, 106, *vagranica* **sp. n.** *uralica* **sp. n.** p. 59, 107, ? *repitens*, *turjensis* **sp. n.** p. 60 108, (?) *philomela* p. 61, all figd. Silurian Ural Mts., KHODALEVICH Trans. Ural Geol. Serv. **1939**.

†*Nanospira* **gen. n.** type-species *N. parvula* **sp. n.** Silurian U.S.A. (Oklahoma), AMSDEN J. Washington Acad. Sci. **39** 6 1949 p. 203.

†*Plectatrypa brownsportensis* **sp. n.** p. 64 figd. Silurian U.S.A. (Tennessee), AMSDEN Bull. Peabody Mus. Nat. Hist. Yale Univ. **3** 1949.

†*Septatrypa* (?) *megaera* p. 62, (?) *sapho* var. *hircina* p. 63, KHODALEVICH 77.

†*Zygospira* described, *deflecta*, *recurvirostris* p. 122 fig., WILSON **187**; *Z. resupinata* **sp. n.** p. 18 pl. 10A, Ur. Ordovician U.S.A., WANG Mem. Geol. Soc. Amer. **42** 1949; *Z. saffordi* fig. pl. v, *recurvirostris* fig. pl. ix, WILSON **188**.

COELOSPIRIDAE

†*Anoplotheca lepida* p. 169, *venusta* p. 170, RENAUD **138**; *A. lepida* p. 464 fig., PILLET **121**.

†*Coelospira saffordi* p. 65 figd., AMSDEN **8**.

SPIRIFERACEA

CYCLOSPIRIDAE

†*Cyclospira* described, *bisulcata* p. 123 fig., WILSON **187**.

SPIRIFERIDAE

†Acrospiriferinae subfamily discussed, includes *Acrospirifer*, *Paraspirifer*, *Platyrachella*, *Mucrospirifer* pp. 96, 97, *Tylothyris* Cooper non M'Coy p. 98, TERMIER & TERMIER **168**.

†*Alphachoristites* **sect. n.** of *Choristites* type-species *C. bisulcatiformis* Semichatova 1941, GATENAUD Bull. Mus. Hist. Nat. Paris (2) **21** 4 1949 p. 492.

†*Alphaneospirifer* **sect. n.** of *Neospirifer*, type-species *Spirifer mahaensis* Huang 1933, GATENAUD Bull. Mus. Hist. Nat. Paris (2) **21** 4 1949 p. 491.

†*Ambocoelia umbonata* p. 199, RENAUD **138**; *A.* sp. ind. p. 98, KOSTIĆ-PODGORSKA **83**.

†*Ambocoeliinae* subfamily discussed p. 106, includes *Ambocoelia*, *Crurithyris*, *Echinocoelia* p. 106, 107, TERMIER & TERMIER **168**.

†*Betachoristites* **sect. n.** of *Choristites* type species *C. kschemyschensis* Semichatova 1941, GATENAUD Bull. Mus. Hist. Nat. Paris (2) **21** 4 1949 p. 492.

†*Betaneospirifer* **sect. n.** of *Neospirifer* type species *Spirifer moosakhailensis* Dav. 1862, GATENAUD Bull. Mus. Hist. Nat. Paris (2) **21** 4 1949 p. 491.

†*Brachythyrina kleini, strangwaysi* figd. pl. 15, IVANOVA **72**.

†*Brachythyris exarata* p. 474 fig., *insueta* **sp. n.** p. 475 fig., *aemula* **sp. n.** p. 476 fig., cf. *integricosta* var. p. 477, (?) *olta* **sp. n.** p. 478 fig., Lower Carboniferous Scotland, REED Ann. Mag. Nat. Hist. (12) **1** 1949.

Choristites p. 492, GATENAUD **48**; *C. inferus* p. 77, var. *teshevi, aljutovensis* **sp. n.**, *priscus* p. 78, var. *senilis*, nov. sp. 2, *radiculosus* p. 79, *r.* var. *aurita, uralicus* var. *brevicula* p. 80, *latiangulatus, mosquensis* p. 81, var. *longuiscula*, var. *solida, sowerbyi*, p. 82, figd., var. *alata, dilatatus, densicostatus* p. 84, *trigonus, loczyi*, var. *transversalis, tashenkensis, trautscholdi*, var. *cinctiformis, jigulensis* p. 86, *shantungensis, globulosus, jigulinoides* p. 87, nov. sp. 4, *supramosquensis*, var. *magna, norini, n.* var. *russiensis, poststriatus, pachrensis* **sp. n.** figd. p. 88, IVANOVA **72**; *C. uralicus* Leb. *var. breviculasimilis* **var. n.** nom. nud. Carboniferous Stalingrad district, Russia, SAVINOV, C.R. Acad. Sci. Moscow N.S. **69** 1 1949 p. 66.

†Costispiriferinae subfamily discussed, includes *Costispirifer* p. 98, *Fimbrispirifer* p. 98, 99, TERMIER & TERMIER **168**.

†*Crurithyris urei* p. 479, REED **126**; *C. planoconvexa* p. 67, pl. v, x, CHRONIC **24**.

†*Cyrtia tasmaniensis* **sp. n.** p. 60 figd. Siluro-Devonian (Eldon group) Western Tasmania, GILL Rec. Queen Victoria Mus. Launceston **2** 2 1948 p. 60.

†Cyrtininae subfamily discussed includes *Cyrtina, Psoidea, Spondylospira* p. 102, TERMIER & TERMIER **168**.

†*Cyrtospirifer* s. str. as subgenus of *Cyrtospirifer* GATENAUD **48** p. 487; *C.* with *Grabauispirifer* **subgen. n.** type species *S.* (*Sinospirifer*) *archiaciformis* Grabau 1931, GATENAUD Bull. Mus. Hist. Nat. Paris (2) **21** 1949 p. 413; *C.* s. str. as section & subsection of *Cyrtospirifer* with species *verneuili, lonsdali*, GATENAUD **48**.

†Cyrtospiriferinae subfamily discussed includes *Cyrtospirifer, Tenticospirifer, Theodossia*, p. 99, 100, TERMIER & TERMIER **168**.

†*Delthyris saffordi* p. 65 figd., AMSDEN **8**.

†*Deothossia* **gen. n.** type species *S.* (*Sinospirifer*) *anossofiioides* Grabau 1931, *vicarii*, GATENAUD Bull. Mus. Hist. Nat. Paris 2 **21** 1949 p. 488.

†*Emanuel[l]a* sp. groupe de *E. undifera* p. 164 fig., RENAUD **138**.

†*Eospirifer eastoni* **sp. n.** p. 98 fig., Devonian Victoria, Australia, GILL Mem. Nat. Mus. Victoria **16** 1949.

†Eospiriferinae subfamily discussed, includes *Eospirifer, Cyrtia* p. **104**, TERMIER & TERMIER **168**.

†*Eurytatospirifer* **subgen. n.** of *Cyrtospirifer* Type species *Spirifer disjunctus* Sowerby 1840, GATENAUD Bull. Mus. Hist. Nat. Paris (2) **21** 4 1949 p. 487.

†*Grabauispirifer* **subgen. n.** of *Cyrtospirifer* section & subsection of *Grabauispirifer* defined by new notational system, GATENAUD Bull. Mus. Hist. Nat. Paris (2) **21** 3 1949 p. 413.

†*Hunanospirifer* p. 489, GATENAUD **48**.

†*Hysterolites* (*Acrospirifer*) *primaevus*? p. 462 fig., PILLET **121**.

†*Hysterolites* (*Hysterolites*) *hystericus* p. 461 fig., *venus ?* p. 462 fig., PILLET **121**.

†Hysterolitinae subfamily discussed includes *Crispella, Delthyris, Hysterolites, Brachyspirifer Spinocyrtia* p. 95. 96, TERMIER & TERMIER **168**.

†*Iubagraspirifer* **subsect. n.** of *Grabauispirifer* Type-species *Sinospirifer wangleighi* Grabau 1931, GATENAUD Bull. Mus. Hist. Nat. Paris (2) **21** 4 1949 p. 487.

†*Iugrabaspirifer* **sect. n.** of *Grabauispirifer* type species *Spirifera whitneyi* Hall 1859, GATENAUD Bull. Mus. Hist. Nat. Paris (2) **21** 4 1949 p. 487.

†*Lamarckispirifer* **subgen. n.** of *Tenticospirifer* type-species *S.* (*Sinospirifer*) *hayasakei* p. 489, species *gortanii, gortanioides, orbelianus, hayasakai, canaliferus, subhayasakai*, GATENAUD Bull. Mus. Hist. Nat. Paris (2) **21** 4 1949.

†*Martellispirifer* **sect. n.** of *Cyrtospirifer* s.s. Type species *Spirifer verneuili* var. *subarchiaci* Martelli 1902, *pekinensis* p. 488, GATENAUD Bull. Mus. Hist. Nat. Paris (2) **21** 4 1949 p. 487.

†*Martinia glabra* var. *ellipsoidalis* **var. n.** p. 463 fig., (?) *anceps* **sp. n.** p. 464, *a.* var. *semisulcata* **var. n.** p. 466 fig., Lower Carboniferous Scotland, REED Ann. Mag. Nat. Hist. (12) **1** 1949; *M.* vascular sinuses in fig. 24, TERMIER & TERMIER **170**; *M. semiplana* p. 97 fig., KOSTIĆ-PODGORSKA **83**.

†*Martinia* (*Merospirifer*) *insolita* **subgen.** et **sp. n.** p. 467 fig., *disparilis* **sp. n.** p. 469 fig., Lower Carboniferous Scotland, REED Ann. Mag. Nat. Hist. (12) **1** 1949.

†*Martinia* (*Paramartinia*) *lingulata* **subgen.** et **sp. n.**, type species *lingulata* **sp. n.** p. 471 fig. Lower Carboniferous Scotland, REED Ann. Mag. Nat. Hist. (12) **1** 1949.

†Martiniinae subfamily discussed includes *Martinia* p. 107, TERMIER & TERMIER **168**.

†*Martiniopsis* (*Elivella*) *bimembris* **sp. n.** p. 472 fig., Lower Carboniferous Scotland, REED Ann. Mag. Nat. Hist. (12) **1** 1949.

†*Merospirifer* **subgen. n.** of *Martinia* type-species *M. insolita* **sp. n.** p. 467, *disparilis* **sp. n.** p. 469, Lower Carboniferous Scotland, REED Ann. Mag. Nat. Hist. (12) **1** 1949.

†*Mirtellaspirifer* **subsect. n.** of *Cyrtospirifer* s.s., type-species *Spirifer* (*Sinospirifer*) *martellii*, Grabau 1931, GATENAUD Bull. Mus. Hist. Nat. Paris (2) **21** 4 1949 p. 488.

†*Neospirifer fasciger* p. 92 fig., KOSTIĆ-PODGORSKA **83**; *N. tegulatus* p. 90, figd., var. *brevirostris*, var. *contracta* p. 91, var. *subrotunda*, cf. *fasciger*, sp. aff. *condor*, aff. *marcui* p. 92, IVANOVA **72**; *N. cameratus* p. 62, pl. vii, *condor* p. 63 pl. x, CHRONIC **24**; *N.* p. 491, GATENAUD **48**.

†*Phricodothyris* aff. *tripustulosa* p. 39, pl. i, figs. 11, 12, text-figs., 16, 17, SCHWARZBACH **152**; *P. septata* **sp. n.** p. 65 pl. v, figs. 9–14, Mid. Pennsylvanian, *guadalupensis peruensis* **subsp. n.** Lr. Permian Peru, CHRONIC Invertebrate Paleontology II. Upper Paleozoic of Peru, Columbia Univ. 1949.

†*Platyspirifer* p. 488, GATENAUD **48**.

†*Reticularia* cf. *rostrata* fig., (?) *reliqua* **sp. n.** p. 480 fig., (?) *spectabilis* **sp. n.** p. 481 fig., Lower Carboniferous Scotland, REED Ann. Mag. Nat. Hist. (12) **1** 1949; *R. curvata* p. 161, cf. *aviceps*, *subcurvata* **sp. n.** p. 163 fig., Devonian N. France, RENAUD Mém. Soc. géol. Min. Bretagne Rennes **7** 2 Paléont. 1942; *R. lineata* p. 97, fig., KOSTIĆ-PODGORSKA **83**.

†Reticulariinae subfamily discussed includes *Reticularia Elytha*, p. 105, *Prosserella*, *Phricodothyris*, *Torynifer* p. 106, TERMIER & TERMIER **168**.

†*Sinospirifer* defined by new system of notation, GATENAUD **48** p. 413.

†*Spirifer bisulcatus oystermouthensis* p. 38, pl. i, fig. 16 *bisulatus calcaratus* p. 39, pl. 1, fig. 15, SCHWARZBACH **152**; *S.* sp. p. 61, GILL **51**; *S.* nov. sp. p. 58, RENAUD **129**; *S.* sp. cf. *venus* p. 129 cf. *elegans* p. 131, sp. group de *primaevus*, *fallax* p. 143, *subcabedanus*, *placei* **sp. n.** p. 147, fig., *becki* **sp. n.** p. 147 fig., *oehlerti* **sp. n.** p. 148 fig., *rousseaui* p. 149 fig., *trigeri* p. 151, *daleidensis* mut. *jouberti* p. 153 fig., *davousti* p. 153, *bazini* p. 154, aff. *bazini*, *collini* **sp. n.** p. 155 fig., *canaliferus*, *dorlodoti* p. 157, *bouchardi*, *indifferens* var. *armoricana* **var. n.** p. 158 fig., *kerfornei* **sp. n.** p. 159 fig., *guyoti* p. 160, sp. p. 161 Devonian N. France, RENAUD Mém. soc. géol. min. Bretagne Rennes **7** 2 Paléont. 1942; *S. tonkinensis* p. 253 fig., NONAKA **117**; *S. rousseaui* p. 426 figd., *hystericus* p. 427, MELÉNDEZ **101**; *S. prohystericus* p. 248 KUTSCHER **86**; *S.* lophophore and relation to valves of shell figs. 15–16 p. 63, TERMIER & TERMIER **167**; *S.* vascular sinuses in fig. 23, TERMIER & TERMIER **170**; *S. cameratus* p. 92 fig., *zitteli* p. 93 fig., sp., *carnicus* p. 95 fig., cf. *lyra*, *fritschi* p. 96 fig., KOSTIĆ-PODGORSKA **83**; *S. radiatus*, *eudora*, *crispus* fig., pl. xxvi, WILSON **188**; *S.* defined by new notational system, GATENAUD **48** p. 491; *S. glaber*, *mosquensis*, figured pl. xii, p. 64, DE LLARENO & ARANGO **31**; *S. miscellus* **sp. n.** p. 450, fig., var. *recessa* var. n. p. 451, cf. *acutus* p. 452 fig., Lower Carboniferous Scotland, REED Ann. Mag. Nat. Hist. (12) **1** 1949; *S.* aff. *S. opimus* p. 61, pl. v, figs. 6, 7, CHRONIC **24**.

†*Spirifer* (*Acrospirifer*) *paradoxus* p. 131, *pellico* p. 134, *arduennensis* p. 137, cf. *arduennensis*, *cultrijugatus* p. 139, *primaevus* p. 140, *speciosus speciosus* p. 144, cf. *speciosus* p. 145, RENAUD **138**.

†*Spirifer* (*Brachythyrina*) [*bisulcatus*] var. *roscobiensis* **var. n.** p. 453 fig., var. *acuticardinalis*, var. *bearnach* **vars. n.** p. 456 figs., *semicircularis* var. n. p. 457 fig., *spiculatus* **sp. n.** p. 458, Lower Carboniferous Scotland, Reed Ann. Mag. Nat. Hist. (12) **1** 1949.

†*Spirifer* (*Crurithyris* ?) *puerulus* **sp. n.** p. 71, 110, figd. Silurian Ural Mts., Khodalevich Trans. Ural. Geol. Serv. **1939.**

†*Spirifer* (*Cyrtia*) *trapezoidalis* p. 69, Khodalevich **77.**

†*Spirifer* (*Cyrtospirifer*) *verneuili* var. *subarchiaci* p. 156, Renaud **138.**

†*Spirifer* (*Delthyris*) aff. *robustus* p. 68 figd., Khodalevich **77.**

†*Spirifer* (*Eospirifer*) *irbitensis* p. 64, (?) sp. ind., *turjensis* p. 65, *ignobilis* **sp. n.** p. 66, 109, (?) *juno* p. 66, *piper*, cf. *radiatus* p. 67, *exsul* p. 68 all figd. Silurian Ural Mts., Khodalevich Trans. Ural Geol. Serv. **1939.**

†*Spirifer* (*Hysterolites*) *carinatus* p. 116, pl. vi, fig. 5, sp. cf. *carinatus* p. 118, pl. i, sp. pl. i, *excavatus* p. 119, *alatiformis* p. 121, cf. *alatiformis* p. 122, pl. vii, *alatiformis* ?, *subsulcatus* p. 123, *subcuspidatus* p. 124, aff. *subcuspidatus*, *hystericus* p. 125; *venus* p. 128 pl. ii, figs. 3, *elegans* p. 130, Renaud **138.**

†*Spirifer* (*Martinia*) *pentameriformis* p. 70, (?) *pseudopentameriformis* **sp. n.** p. 71, 110 all figd. Silurian Ural Mts., Khodalevich Trans. Ural. geol. Serv. **1939.**

†*Spirifer* (*Paulonia*) *monansensis* **sp. n.** p. 460 fig., Lower Carboniferous Scotland, Reed Ann. Mag. Nat. Hist. (12) **1** 1949.

†*Spirifer* (*Purdonella*) *nikitini* var. *praecursor* **var. n.** p. 462 Lower Carboniferous Scotland, Reed Ann. Mag. Nat. Hist. (12) **1** 1949.

†*Spirifer* (? *Quadrifarius*) sp. p. 99, Gill **52.**

†*Spirifer* (ili *Syringothyris* ?) cfr. *bistritze* p. 94 fig., Kostić-Podgorska **83.**

†*Spirifer* (*Tylothytis* [? err. pro *Tylothyris*]) *fifensis* **sp. n.** p. 459 fig., Lower Carboniferous Scotland, Reed Ann. Mag. Nat. Hist. (12) **1** 1949 p. 459 fig.

†*Spiriferella* cf. *saranae* p. 86 fig., Nonaka **116**; *S.* p. 492, Gatenaud **48.**

†Spiriferinae subfamily discussed p. 100, includes *Spirifer* s.s. *Neospirifer*, *Brachythyris*, *Choristites*, p. 101, Termier & Termier **168.**

†Syringothyrinae subfamily discussed, includes *Syringothyris* p. 103, Termier & Termier **168.**

†*Tenticospirifer* as genus & subgenus, Gatenaud **48** p. 489.

†*Theodossia* p. 488, 489, Gatenaud **48**; *T. uchtensis*, *tanaica* figured, Ivanova **72.**

†*Yrctospirifer* **subsect. n.** of *Cyrtospirifer* type-species *S.* (*Sinospirifer*) *pellizzarii* Grabau 1931, *pellizzariformis* p. 488, Gatenaud Bull. Mus. Hist. nat. Paris (2) **21** 4 1949.

Spiriferinidae

†*Alphacyrtiopsis* **sect. n.** of *Cyrtiopsis* type species *C. murchisoniana* var. *barrauxensis* Grabau 1931, *shensiensis*, Gatenaud Bull. Mus. Hist. Nat. Paris (2) **21** 4 1949 p. 490.

†*Betacyrtiopsis* **sect. n.** of *Cyrtiopsis* type *C. kayseri* Grabau 1931, Gatenaud Bull. Mus. Hist. Nat. Paris (2) **21** 4 1949 p. 490.

†*Cyrtina heteroclyta* p. 171 var. *pauciplicata*, *demarlii* p. 173, *intermedia* p. 174, Renaud **138**; *C. multiplicata* p. 128 fig., Dahmer **28**; *C. heteroclita* ? p. 463, Pillet **121.**

†*Cyrtiopsis* as genus, *C.* s. str. as subgenus and section, Gatenaud **48.**

†*Grabauicyrtiopsis* **subgen. n.** of *Cyrtiopsis* type-species *C. graciosa* Grabau 1925, Gatenaud Bull. Mus. Hist. Nat. Paris (2) **21** 4 1949 p. 490.

†*Paracyrtiopsis* **sect. n.** of *Cyrtiopsis* type-species *C. spiriferoides* Grabau 1931, Gatenaud Bull. Mus. Hist. Nat. Paris (2) **21** 4 1949 p. 490.

†*Punctospirifer patulus* **sp. n.** p. 101 pl. xix figs. 1–7, *adstrictus* **sp. n.** p. 103 pl. xix figs. 8–19, *inflatus* **sp. n.** p. 104, pl. xix figs. 20–24, sp. p. 105 Lower Permian Peru, Chronic Invertebrate Paleontology II. Upper Paleozoic of Peru, Columbia Univ. **1949**; *P. kentuckiensis*, *angulata*, *pulcher*, phyletic size increase in late Palaeozoic, Newell **113** p. 107, fig.

†*Reticulariina* p. 105, cf. *R. spinosa* pl. xx, *atava* **sp. n.** p. 106 pl. xx figs. 2–13, *fruticosa* **sp. n.** p. 107 pl. xx figs. 14–20, *constricta* **sp. n.** p. 108 pl. xx, figs. 21–27 Lower Permian Peru, CHRONIC Invertebrate Paleontology II. Upper Paleozoic of Peru, Columbia Univ. **1949.**

†*Sinocyrtiopsis* **subgen. n.** of *Cyrtiopsis* type-species *C. transversa* Grabau 1925 GATENAUD Bull. Mus. hist. nat. Paris (2) **21** 4 1949 p. 491.

†*Spiriferina* aff. *walcotti* p. 118, cf. *walcotti* p. 121, 122, *tumida* p. 122, TRÉMPY **174**; *S. peracuta* p. 482 fig., REED **126**; *S. multiplicata* p. 86, fig., NONAKA **116**; *S. cristata* p. 56 fig., cf. *nasuta* p. 57 fig., MINATO **104**; *S. cristata* var. *fastigata* p. 94 fig., KOSTIĆ-PODGORSKA **83**; *S. coronae* p. 91 fig., KOSTIĆ-PODGORSKA **83**; *S. walcotti* var. *corroyi* **var. n.** p. 5 pl. 1 fig. Lower Lias Pliensbachian France, CHARLES in ALLOITEAU & CHARLES Mém. Soc. Et. paléont. et paleth. Provence **1** Mém. **2** no. 3 1948; *S. pectinata* p. 116, sp. p. 117, BEŠIĆ **15**; *S. decipiens* p. 170, ĆIRIĆ **25.**

†*Spiriferina* (*Mentzelia*) *microglossa* p. 115 fig., cf. *köveskalliensis* p. 116, BEŠIĆ **15**; *S.* (*M.*) *mentzelii* p. 174, DANILOVA **29.**

†Spiriferininae subfamily discussed, includes *Punctospirifer Spiriferina* p. 102, 103, TERMIER & TERMIER **168.**

ROSTROSPIRACEA

MERISTELLIDAE

†*Dicamara plebeia* p. 177, RENAUD **138.**

†*Merista tennesseensis* p. 66 figd., AMSDEN **8**; *M. upsilon* p. 72, var. *juno* p. 74, *rufina* **sp. n.** p. 73, 111 figd. Silurian Ural Mts., KHODALEVICH Trans. Ural. Geol. Serv. **1939.**

†*Meristina maria* fig. pl. xxvi, WILSON **188.**

†*Nucleospira megalorhyncha* **sp. n.** Siluro-Devonian (Eldon Group), GILL Rec. Queen Victoria Mus. Launceston **2** 2 1948 p. 62 figd.; *N. lens* p. 175, *kolihai* **sp. n.**, sp. p. 176 fig., (?) sp. p. 177 Devonian N. France, RENUAD M m. soc. min. Bretagne Rennes **7** 2 Paléont. 1942.

†*Whitfieldella nitida* fig. pl. xxvi, WILSON **188.**

UNCITIDAE

†*Uncites gryphus* p. 428 figd., MELÉNDEZ **101.**

RHYNCHOSPIRINIDAE

†*Homoeospira evax* fig. pl. xxvi, WILSON **188**; *H. elongata, schucherti* p. 67 figd., *beecheri* p. 68 figd., AMSDEN **8.**

†*Hustedia sicuaniensis* **sp. n.** p. 109, pl. xvii, figs. 4–9, *meridionalis* p. 111, pl. xvii, figs. 10–17, Lower Permian Peru, CHRONIC Invertebrate Paleontology II. Upper Paleozoic of Peru, Columbia Univ. **1949.**

†*Retzia guerangeri* p. 431 figd., MELÉNDEZ **101**; *R.* (?) *umbra* p. 74, KHODALEVICH **77**; *R. schwageri* p. 117, BEŠIĆ **15**; *R. melonica*, RENAUD **138** p. 178.

†*Trigeria adrieni* p. 190, *guerangeri* p. 191, *carinatella, gaudryi* p. 193, *bergeroni, sarthacensis* **sp. n.** fig., sp. p. 195, Devonian N. France, RENAUD Mém. soc. géol. min. Bretagne **7** 2 Paléont. 1942.

ATHYRIDAE

†*Anathyris ezquerrai* p. 185, *alejensis* p. 186 fig., RENAUD **138.**

†*Athyris* in Burlington limestone chert (Mississippian) showing relation of lamellar extensions to rest of shell surface, UNKLESBAY **176**; aff. *A. squamosa* p. 40 pl. i, fig. 3, SCHWARZBACH **152**; *A. undata* p. 178 fig., *campomanesii, concentrica* p. 180, *subconcentrica*, sp. cf. *concentrica* p. 182 fig., *philpotti* **sp. n.** p. 183 fig., *pilapayensis, ventrosa*, sp. p. 184 fig., Devonian N. France, RENAUD Mém. soc. géol. min. Bretagne **7** 2 Paléont. 1949; *A. concentrica* var. *buchi* p. 463 fig., PILLET **121.**

†*Cleiothyridina barbata* **sp. n.** p. 70, pl. vi, figs. 1*a–c*, Mid. Pennsylvanian *intonsa* **sp. n.** p. 71, pl. xi, figs. 1–4, Lr. Permian Peru, CHRONIC Invertebrate Paleontology II. Upper Paleozoic of Peru Columbia Univ. **1949.**

†*Composita subtilita peruviana* **subsp. n.** p. 72, pl. xii, figs. 1–14, *minuscula* **sp. n.** Lower Permian, p. 76, pl. xii figs. 15–18, sp. p. 76 pl. vi, Middle Pennsyl-

vanian Peru, CHRONIC Invertebrate Paleontology II. Upper Paleozoic of Peru, Columbia Univ. **1949.**

†*Spirigera ezquerrai* p. 430 figd., MELÉNDEZ **101**; *S. trigonella* p. 114 fig., BEŠIĆ **15.**

†*Spirigera* (*Stolzenburgiella*) *bukowskii* p. 114 fig., BEŠIĆ **15.**

†*Spirigera* (*Tetractinella*) *cornutula*, BEŠIĆ **15** p. 115.

†*Triathyris schulzii* p. 187, RENAUD **138.**

SUBORDER GRYPHOIDEA

TEREBRATULACEA

RHIPIDOTHYRIDAE

†*Rhenorensselaeria strigiceps* p. 196, cf. *strigiceps* p. 197 fig., RENAUD **138**; *R. crassicosta, propinqua* p. 284, KUTSCHER **86.**

MEGANTERIDAE

†*Meganteris ovata ovata* p. 187, *inornata* p. 188, *deshayesi* p. 189, *henni* p. 190, RENAUD **138.**

DIELASMATIDAE

†*Cryptonella minor* p. 198, *haidingeri* p. 199, RENAUD **138**; *C.* sp. p. 463 fig., PILLET **121.**

†*Dielasma scitulum* **sp. n.** p. 100 pl. xviii, figs. 4–9, *rotundum* **sp. n.** p. 101 pl. xviii, figs. 1–3, Lower Permian Peru, CHRONIC Invertebrate Paleontology. II. Upper Palaeozoic of Peru, Columbia Univ. **1949.**

TEREBRATULIDAE

Liothyrina fulva figured p. 334, ALLAN **3.**

Liothyris moseleyi vascular sinuses in, fig. 34, TERMIER & TERMIER **170.**

†*Pygope diphyoides* p. 436 figd., MELÉNDEZ **101.**

†*Terebratula vitrea* recorded Quaternary Tunis, BEDE **13** p. 50; *T. bukowskii* p. 108 fig., BEŠIĆ **15**; *T. gebelica* p. 145, *libyca* p. 146, *T. mediterranea* p. 147, *T. mediterranea* var. *uniplicata* **var. n.** p. 148, *T. sofegginensis* p. 149, *T. tripolitensis* **spp. n.** all species figured, Maestrichtian Libya, BRUNO Riv. Ital. Paleont. Milano **55** 4 1949; *T. sanctae crucis* **sp. n.** p. 391, fig., *biplicata acuta, salevensis, russiliensis, carteroni, sella*, fig. p. 393, CATZIGRAS Bull. Soc. geol. Fr. (5) **18** 1948; *T.* sp. ĆIRIĆ **25**; *T.* sp. ind. p. 178, DANILOVA **29**; *T. punctata* p. 434, figd., *sella* p. 435 figd., MELÉNDEZ **101**; *T. biplicata*, MAYNC **100** p. 265; *T.* sp., ? *millenaria* p. 165, TRÜMPY **174**; *T. moutoniana* fig., PETKOVIĆ **119**; *T.* lophophore and relation to valves of shell figs. 19, 20 p. 63, TERMIER & TERMIER **167.**

†*Terebratulina crossei, japonica*, HATAI **56** p. 136; *T. morelleti* p. 25, MORELLET & MORELLET **108**; *T. substriata* p. 436 figd., MELÉNDEZ **101**; *T. striata* p. 73 pl. v fig. 26, KOKOSZYNSKA **82.**

Terebratulina caput serpentis vascular sinuses in, fig. 32, TERMIER & TERMIER **170.**

INCERTAE SEDIS

†*Terebratula* (*Coenothyris*) *vulgaris* p. 175, DANILOVA **29.**

TEREBRATELLACEA

DALLINIDAE

†*Coptothyris grayi*, HATAI **56** p. 137.

†*Dallinella smithi*, HATAI **56** p. 137.

†*Macandrevia delicatula*, HATAI **56** p. 136.

Macandrevia cranium vascular sinuses in fig. 31, TERMIER & TERMIER **170**; *M. lata* figured p. 334, ALLAN **3.**

†*Terebratalia* spp., *smithi*, cf. *kemphilli* recorded, WOODRING, BRAMLETTE & KEW **192** p. 60; *T. pacifica*, HATAI **56** p. 137.

Terebratalia coreanica exterior of both valves & internal structure seen in X-ray photograph pl. i p. 623, SCHMIDT **150.**

LAQUEINIDAE

†*Kurakithyris* **gen. n.** type species *quantoensis* **sp. n.**, *nipponensis* p. 99, HATAI Proc. Jap. Acad. **22** 4 1946. (Recorded as new gen. in Z.R. for 1947).

†*Laqueus jeffreysi* recorded p. 60, WOODRING, BRAMLETTE & KEW **192.**

†*Pictothyris hanzawai* referred to genus *Kikaithyris*, *hanzawai* forma *lenticularis* not referred to *Kikaithyris*, forma *lenticularis* related to *Pictothyris elegans* Yabe & Hatai 1936, p. 102, *rubella* sp. n. p. 103 figd. Cenozoic Japan, YABE & HATAI Proc. Jap. Acad. **22** 4 1946.

MEGATHYRIDAE

†*Argyrotheca* (*Cistella*) *bouryi* p. 25, MORELLET & MORELLET **108.**

†*Megathyris* lophophore & relation to valves of shell, figs. 17–18 p. 63, TERMIER & TERMIER **167.**

KRAUSSINIDAE

Kraussina relationships p. 538, *rubra* brachial development figs., ELLIOTT **37.**

Megerlivia [err. pro *Megerlina*] *lamarckiana* figured p. 334, ALLAN **3.**

Mühlfeldtia sanguinolenta figured p. 334, ALLAN **3.**

TEREBRATELLIDAE

†*Choristothyris plicata* recorded figd., STEPHENSON **158.**

†*Magadina* dorsal valve of species belonging to new genus near to *M.* p. 25, MORELLET & MORELLET **108.**

Magasella with type *Terebratula evansii* Dav. = *Terebratella sanguinea* (Leach) for multicostate lineage of Terebratellas in New Zealand, ALLAN **5** p. 289.

Magella distribution discussed, ALLAN **5** p. 289.

Magellania iredalei loop of spirit specimen exposed in X-ray photograph pl. i p. 622, SCHMIDT **150**; *M.* distribution discussed, probably only Australian, ALLAN **5** p. 289; *M. flavescens* figured p. 336, ALLAN **3.**

Neothyris sp. exterior and loop of spirit specimen exposed in X-ray photograph pl. i p. 622, SCHMIDT **150**; *N. lenticularis* new method of ciliary feeding p. 367, RICHARDS **140.**

†*Pachymagas* distribution discussed, probably restricted to South America, ALLAN **5** p. 289.

†*Stethothyris* distribution discussed probably restricted to New Zealand, ALLAN **5** p. 288.

Terebratella distribution discussed probably South American and not in New Zealand, ALLAN **5** p. 289. (See *Waltonia* & *Magasella*).

Waldheimia flavescens vascular sinuses fig. 33, TERMIER & TERMIER **170.**

Waltonia with type *W. valenciennesi* Dav. = *Terebratula inconspicua* for smooth lineage of Terebratellas of New Zealand, ALLAN **5** p. 289.

INCERTAE SEDIS

ZEILLERIIDAE

†*Aulacothyris turgidula* p. 109 fig., *supina* p. 110, fig., BEŠIĆ **15.**

Terebrirostra neocomiensis p. 73, pl. v, fig. 27, KOKOSZYNSKA **82.**

†*Waldheimia* cf. *angustaeformis* p. 111, BEŠIĆ **15.**

†*Zeilleria jauberti* figured plate opp. p. 28, SOLER & PARDO **157**; *Z. vicinalis* p. 79, 80, sp. nov. aff. *vicinalis, marsupialis*, sp. p. 79, 121, cf. *marsupialis* p. 81 cf. *conocollis, numismalis* p. 146, TRÜMPY **174**; *Z. cornuta* var. *valabreguei* var. n. p. 6, pl. i, fig. 11, Middle Lias, *margaritatus* zone Provence, CHARLES in ALLOITEAU & CHARLES Mém. Soc. Et. Paléont. et. paleth. Provence 1 Mém. 2 no. 3 1948.